PROFILES

CAREERS IN THE U. S. DEPARTMENT OF AGRICULTURE

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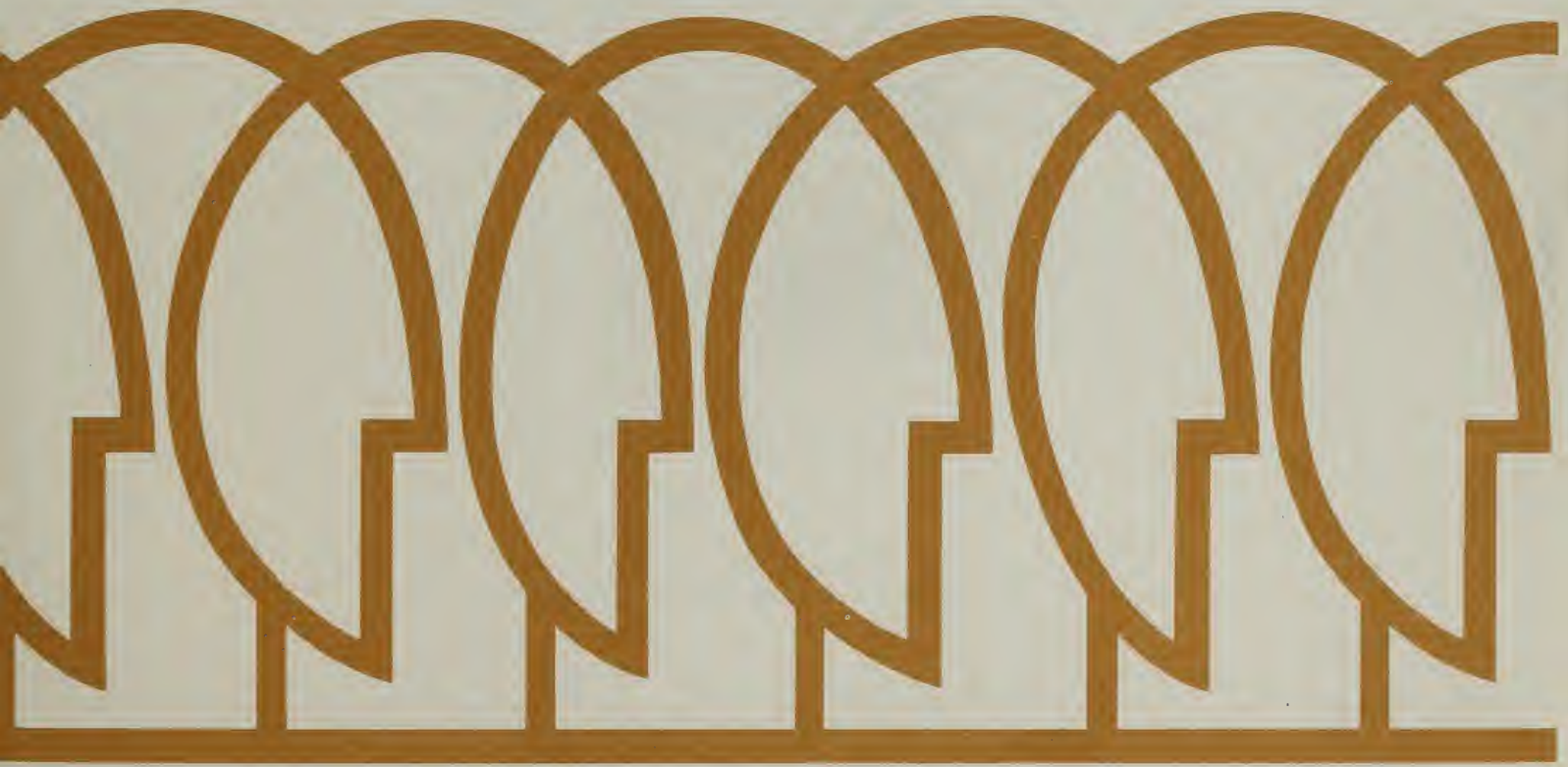

DEPARTMENT OF AGRICULTURE
WASHINGTON 25, D.C.

The U. S. Department of Agriculture is truly a Department concerned with the public interest. Over 60 percent of our activities provide services to all Americans - not just our farm population.

In this Department, as in many areas of the Federal Service, momentous decisions that have significant economic, social and political consequences, both national and international, are a matter of daily concern. The opportunity for personal involvement in these decisions or the opportunity to contribute through outstanding scientific or technological achievement, are among the most attractive features of working in the Department.

The very diversity of programs has intensified the Department's need for resourceful and creative young people. Only through the efforts of the colleges and universities of America will we be able to continue the progress already achieved. It is to the institutions of higher learning that we look for career minded talent and to the faculty for help in stimulating greater interest and sensitivity to the challenge, excitement and responsibility of the Federal Service.

Orville L. Freeman

Orville L. Freeman
Secretary of Agriculture

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SECTION
I

PROFILES OF THE FEDERAL CAREER SERVICE

PROFILES OF THE FEDERAL CAREER SERVICE

The 20th century has proved to be an exciting time in which to live. Man has mass-produced the automobile, invented the airplane, harnessed the atom, fought two World Wars, and is now engaged in the conquest of space. Nowhere have the accomplishments and the problems of this century had a greater impact than on Government.

The Government's role in the events that have shaped today's world has been one of active participation. As a result, many civil service employees are in the vanguard of those responsible for significant achievements and contributions to our society. This is borne out by the fact that scientists working for the Federal Government contributed to 7 of the 10 most recent important scientific achievements: (1) hydrogen fusion; (2) power from nuclear fission; (3) electronic computers; (4) commercial jet aviation; (5) solid state electronics; (6) economical conversion of salt water to fresh water, and (7) the penetration of space.

In ever increasing numbers college graduates look to the Federal service for careers. There they are finding opportunities and rewards found in few other callings. Many choose careers in the Government because of the excitement inherent in the far-reaching activities of the Government. Others receive great satisfaction from the opportunity of serving all the American people. Still others seek Government careers because of the opportunities for initiative and creative research.

Government has become so important and offers such varied opportunities that it merits serious consideration by those interested in challenging, responsible, and rewarding careers.

Role of U.S. Department of Agriculture

For over 100 years, the U.S. Department of Agriculture has protected, served, and represented the public interest. Engaging in more activities which are of benefit or service to the farmer and to the consumer than any other department or agency of the Federal Government, the U.S. Department of Agriculture has contributed greatly to one of the world's most important accomplishments—the conquest of famine.

The Department has played a vital and continuous role in the economic growth of America, creating a technological revolution in agriculture. However, while the Department's history of accomplishments gives cause for pride, there are still problems of vital concern. Some of these are underconsumption, overproduction, conservation and use of resources, and the need for greater opportunities for rural people in nonfarm occupations.

In one way or another, the work of the Department of Agriculture touches every American every day.

Employees of the Department:

- Help to conserve forests, water, and soil resources and to revitalize land that is unproductive.
- Inspect meat and poultry, eradicate pests, and protect the National Forests.
- Operate the largest food-service industry in the United States—The National School Lunch Program.
- Conduct research in such areas as crops, automation, pests, food, the biological sciences, and natural resources.
- Represent the United States in international

meetings and aid in the marketing of the abundance of American agriculture.

- Insure crops against drought, flood, insects, and hail, and provide loans for the development of rural America.

These and hundreds of other services have a far-reaching effect on the health, welfare, economy, and security of the Nation.

The Department's 100,000 employees have opportunities for community service, self-development, and scientific contributions. They work in hundreds of offices, laboratories, and installations throughout the United States, in its territories, and in many foreign countries. They perform almost every kind of work done in private employment, as well as many jobs unique to Government.

The U.S. Department of Agriculture operates a long-range recruiting program directed toward the primary source of the Nation's capable, well-trained young people—the Nation's colleges and universities. It is not recruiting just for today's needs, but for the future as well. The young men and women who measure up to the high standards required and who can grow and develop on the job may aspire to the highest career assignments in the years ahead. They will be the career managers, the skilled technicians, and the professional leaders of tomorrow.

How Jobs Are Filled

The Department of Agriculture is seeking the best qualified person for each position, regardless of race, creed, color, sex, politics, or national origin. Appointments to civil service jobs are made on the basis of ability to do the job—ability demonstrated by education, experience, and competitive examinations.

The civil service qualification requirements insure that public jobs are filled only by those who have the needed skill, necessary training, or experience to do the work. In addition, they provide the opportunity for all qualified applicants to compete for a job on an equal basis. This two-fold goal is the cornerstone of the Federal merit system.

Civil service positions are filled from lists containing names of people who have passed competitive examinations for jobs in a particular field. Competitive examinations are announced and conducted by the Civil Service Commission, the central recruiting agency for the executive branch of the Government.

The first step in obtaining a job with the Department of Agriculture rests with the applicant. He must express an interest in working for the Government and apply for the examination for the position in which he is interested. Information about examinations and instructions on how to apply for an examination may be obtained from employment offices of agencies of the Department of Agriculture, or the Civil Service Commission regional or branch offices. Many college placement offices maintain copies of examination announcements for the information of students.

Some examinations include written tests. These are given to applicants in a group at an appointed time and place. When a written test is given, applicants are sent notices of when and where to report.

Positions not Requiring Written Tests

Many positions in the U.S. Department of Agriculture are filled through examinations that do not require a written test. The applicant is rated on the education, training, and experience he lists on the standard application forms. Examples of positions filled without written tests are: accountants, chemists, engineers, foresters, physicists, veterinarians, and many other professional fields. Examinations for such positions are often administered by a Board of U.S. Civil Service Examiners located at one of the employment offices of the Federal agency.

Federal Service Entrance Examination

The Federal Service Entrance Examination offers a unique avenue through which the college-caliber person may enter the Department. Introduced in 1955, the Federal Service Entrance Examination revolutionized Government recruiting by combining several separate examinations into one multi-purpose recruitment device. It is open to all college graduates and senior students,

regardless of college major, and to others who can qualify on the basis of experience.

The Federal Service Entrance Examination is an integral part of the career staffing plan of the Federal Government. It looks to the future, recruiting for careers, not just for jobs. It selects people with potential for growth and for advancement up the career ladder.

Management Intern Program

The Federal Service Entrance Examination is also used to recruit a select number of people with outstanding management potential.

Candidates for the Management Intern Program must pass the Federal Service Entrance Examination. In addition, they must pass a Management Intern Examination and an oral interview. Those who meet the qualifications for an internship have an exceptional opportunity for a bright career in the Department of Agriculture.

Each year the Department selects approximately 10 interns, primarily for positions in the Washington, D.C., area. Management interns participate in a special training program lasting 1 year. During this time they receive intensive training—both formal and on-the-job. The program includes group seminars, special projects, rotational assignments, and opportunities for intern scholarships.

Interns are recruited by the Department at the GS–7 and GS–9 levels. Upon completion of the program, the intern is eligible for promotion. Those who continue to show promise are given continued attention and opportunities for development.

The Career System

The Federal Government is the largest employer in the United States. The U.S. Department of Agriculture, with its 100,000 employees, is the fourth largest department in the Federal Government. Like progressive private employers, the Department of Agriculture has a well-rounded career plan for its employees. The Government, as an employer, behaves in many respects like any other large employer—it hires, trains, promotes, and separates thousands of employees each year. However, because of its unique position as a public servant, the Government cannot function entirely like a private employer. In general, the Government is different in that:

- Selection and advancement are based on a competitive merit system.
- No discrimination because of race, religion, politics, national origin, or sex can be tolerated.
- Political activities of most employees are restricted.
- Administrative decisions are subject to judicial review.
- Strikes and asserting the right to strike are prohibited.

The career civil service is the foundation upon which the honest, effective, and efficient Federal Government has been built. The career staff of highly competent and well-informed people stands ready at all times to carry out effectively the policies of Federal administrators. It provides the flexibility, knowledge, objectivity, and technique necessary for the smooth operation of the Government. In return, the career staff receives leadership and direction from policymakers appointed by the President.

The foundation of the Federal Career Plan is the Career-Conditional Appointment System. Under this system, the rights and privileges of employees in such matters as employment, promotion, transfer, re-employment, and retention during reductions in staff are determined.

The appointment system takes into account the fact that not everyone who enters Federal employment intends to spend all of his working life in public service and that the Government may not have continuing jobs for all those who are employed at a given time, such as during an emergency. Thus, the Government accords more and greater rights and privileges to employees with full career standing than to those who have not met all requirements as careerists.

To gain full career standing, the employee must be selected competitively for his job and in most cases complete 3 years of conditional service. The conditional period of service enables the employee to demonstrate his intention to make the public service his career and establishes the ability of the Government to provide a continuing career.

Career Opportunities

The U.S. Department of Agriculture ranks high in the liberal benefits afforded to its employees. Long recognized as a leader in the field of personnel management, the Department offers many career advantages to those seeking employment.

Among these advantages are the (1) outstanding training opportunities available, (2) pay schedules that are comparable to those of private industry, (3) promotional opportunities based on merit, (4) liberal vacation and sick leave benefits, (5) a generous retirement and family-protection program, and (6) participative group health and life insurance programs.

Training and Development

The U.S. Department of Agriculture has always recognized the importance of the professional development of its employees. In furtherance of this principle, the USDA Graduate School was created in 1921. This unique institution was instrumental in the development of Departmental employees long before Government-sponsored training was accepted throughout the Federal Government. However, the Government Employees Training Act now authorizes many types of training within Government and in non-Federal facilities, such as colleges, universities, manufacturing plants, and laboratories.

The Department of Agriculture is interested in equipping the employee not only to do his current job but also in his long-range development. Through participation in these educational programs employees have the opportunity to keep abreast of new and changing developments in their field and are able to prepare themselves for positions of greater responsibility.

Career Advancement

Advancement in the U.S. Department of Agriculture is unlimited, giving each employee the opportunity to grow professionally and assume increasingly responsible positions. The promotion programs of the Department are based upon the merit principle and are designed to identify and promote the best qualified employees.

The Department of Agriculture, like all employers, recognizes that the desire to get ahead is a major influence that motivates employees. Therefore, the Department is constantly improving its techniques of identifying capable and promising employees and encouraging and aiding them to prepare for more responsible positions.

Employees in many scientific positions have the opportunity to advance up the career ladder without assuming supervisory and management responsibilities. This enables them to leave the management to others while they concentrate on their scientific and research endeavors.

The Department of Agriculture, like other employers, follows the policy of promoting from within its own ranks; however, this consideration does not overshadow the fact that the best qualified person is sought for each position to be filled. On occasion, the Department finds the best available candidate for a vacant position elsewhere in Government or outside the Federal service.

This realization that "new blood" is essential to an organization is shared by all the Federal departments. Therefore, career opportunities are never limited in the Federal Government. People move within an agency to another location or transfer to other departments or agencies of the Government. This mobility enhances the career development of the employee and enables him to serve his Government in the most effective manner.

Salary

The year 1962 was one of the most important in the history of the Federal pay system. The Federal Salary Reform Act of 1962 established the policy that, for the same levels of work, salaries of Government employees should be comparable with salaries paid in private industry. To maintain the continued comparability of salaries, the Government will conduct annual salary reviews and recommend any needed pay adjustments to Congress.

This means that a graduate choosing a career in the Department of Agriculture can now expect pay realistically geared to the economy. *The current pay schedule is located at the end of this section,* page 7.

Entrance level positions for college graduates usually are in grade GS–5, GS–7, or GS–9. With

a bachelor's degree an applicant usually qualifies for GS–5. If the applicant is in the upper 25 percent of his class or has a "B" average or other equivalent scholastic attainment, he may qualify for GS–7.

Ordinarily, a master's degree qualifies an applicant for GS–7 and a doctor's degree for GS–11. In some fields the holders of master's degrees and doctor's degrees, with outstanding scholastic records, may qualify for entrance at grades GS–9 and GS–12, respectively.

Most professional positions in engineering, physical sciences, and other shortage-category fields carry with them a higher starting salary. The Civil Service Commission has authorized recruitment at rates above the usual entrance salary for such positions as professional engineers, chemists, physicists, mathematicians, and veterinarians.

Research Environment

The Department of Agriculture has many people engaged in fundamental, applied, and developmental research. To college graduates interested in these positions the research environment in the Department is very important.

Much of the Department's research is conducted in large, modern, and specially designed and equipped laboratories. Most research activities are located at or near educational centers. Thus, the agriculture research employee has ample opportunities for continued educational and professional advancement.

Scientists in the Federal environment are constantly involved in much of the Nation's scientific endeavor, whether it is through a program directly undertaken by the Department, one of its cooperative programs with States, or grants in aid to universities and colleges, or to foundations. The leadership responsibility for research enjoyed by Department scientists compares favorably with that of the other Federal agencies and private industry.

The scientist works in an environment conducive to utilizing his full creative talents to produce new and significant developments. He is free from administrative detail and is thus able to devote his time to research projects in which he has personal interest. Research initiative is encouraged and has led to many of the startling research discoveries in which this Department is justifiably proud.

Professional Recognition

Opportunities for professional recognition are excellent. The Department of Agriculture encourages and helps its employees to gain professional recognition in their special fields. Participation in activities of professional societies and publication of papers in professional journals or agency publications is encouraged. The Department sponsors seminars, symposia, and other meetings of professional groups where employees are able to meet and exchange ideas.

Employment Benefits

Fringe benefits in the Federal service compare favorably with those available anywhere. These are some of the principal ones:

Vacation and Leave Privileges

Leave privileges are designed to maintain at a high level the health, efficiency, and morale of employees.

Annual leave.—Each year, employees earn annual leave for vacations and other purposes, as follows: employees with less than 3 years of service—13 days; those with 3 to 15 years of service—20 days; and those with 15 years of service—26 days. For leave purposes, time spent in military service counts as years of service.

Annual leave that is not used in any year may be accumulated up to a limit of 30 days. If an employee leaves the Federal service, he is paid a lump sum for the amount of annual leave he has accumulated.

Sick leave.—Sick leave is earned at the rate of 13 days each year and is used for illness and for medical examination or treatment. Unused sick leave accumulates without limit and provides employees financial protection for periods of prolonged illness.

Military leave.—Members of the National Guard or military reserve components are entitled to military leave for training or active duty. A

maximum of 15 days is allowed each year with full pay and without charge against annual leave.

LEAVE WITHOUT PAY.—Leave without pay may be granted for reasons which are mutually beneficial to the Government and the employee; for instance, for full-time graduate work or other advanced study that is related to the employee's work.

Medical and Compensation Benefits

A service-connected illness or injury entitles an employee to medical attention, hospitalization, and compensation. These benefits cost the employee nothing.

Life insurance is available at low cost to full-time permanent employees. The amount of insurance available depends on the employee's basic salary and is computed in multiples of $1,000. This insurance is not mandatory, but most employees take advantage of it to help provide economic security for their families. No medical examination is required.

Several group-health insurance plans are available to all full-time permanent employees under a voluntary program; part of the premium is paid for by the Department. Because of the wide variety of plans offered, the employee is able to select the plan that best suits his needs. Hospitalization and surgical benefits are provided in all policies. The specific benefits and the cost of insurance depends on the type of plan selected and the coverage desired.

Retirement System

The Federal Service Retirement System is sound and attractive. It is one of the outstanding fringe benefits of Federal employment. It incorporates not only the features of a retirement program but also family-survivor protection in the event of the employee's death. After 5 years of service, the employee is eligible for disability retirement if he becomes totally disabled.

Employees and the Department contribute jointly to the retirement fund. The employee's share is 6½ percent of his annual salary. If an employee leaves the Federal service he may withdraw his share of the contribution. If he has 5 years or more of Federal service, he may leave this deposit in the retirement fund for an annuity at age 62.

* * *

This information illustrates the advantages of the Federal career system. The benefits are equal to and even exceed many of the systems of private industry. The Federal career system combines financial reward with the less tangible but equally important personal satisfactions obtained from having a challenging and worthwhile job.

Current Salary Schedule

PAY SCHEDULE EFFECTIVE JULY 1964

	Grade	Entrance Salary	In-grade Increase	Maximum Salary
Bachelor's Degree	GS–5	$5000	$165	$6485
	GS–6	5505	185	7170
Master's Degree	GS–7	6050	200	7850
	GS–8	6630	220	8610
Doctor's Degree	GS–9	7220	245	9425
	GS–10	7900	270	10330
	GS–11	8650	295	11305
	GS–12	10250	355	13445
	GS–13	12075	420	15855
	GS–14	14170	490	18580
	GS–15	16460	570	21590
	GS–16	18935	655	24175
	GS–17	21445	750	24445
	GS–18	24500	----	-----

RATES FOR CERTAIN SHORTAGE CATEGORY POSITIONS*

Engineer, Physicist, Chemist, and Forest Technologist	GS–5	$5990	$165	$7475
	GS–7	7050	200	8850
	GS–9	7710	245	9915
	GS–11	8945	295	11600
Veterinarian	GS–9	$7710	$245	$9915

**The Civil Service Commission has the authority by law to revise the rates and/or job categories covered. The above jobs and rates are in effect as of the issue date of this publication.*

SECTION II

PROFILE OF THE DEPARTMENT

AGENCIES AND STAFF OFFICES

Office of the Secretary

■ The Secretary of Agriculture administers agricultural and consumer programs that have worldwide as well as national impact on the American economy, society and national defense. These research, education, conservation, adjustment and marketing programs are carried out through the efforts of 16 agencies and 9 staff offices.

The Staff Offices of the Secretary provide the administrative coordination and leadership necessary for the effective management of the programs of the Department of Agriculture.

Office of Budget and Finance

The Office of Budget and Finance directs, coordinates, and provides leadership in the financial management of the Department's budgetary administration.

Particular emphasis is given to activities of a staff nature, as distinguished from operating budget activities carried out in program agencies. At the staff office level, the emphasis is on the broad aspects of the budget process, rather than on the "figure-handling" details of budgeting. Within this framework, program planning is an integral part of the budget development process. Consideration is given to proposed legislation affecting activities of the Department. Accounting systems are designed to establish accountability for funds appropriated or otherwise available, and fiscal information is provided for USDA's managers.

Work of the Office includes staff services to the Secretary, technical guidance and assistance to program agencies within the Department, and liaison activities with the Bureau of the Budget, the Treasury Department, the General Accounting Office, and the appropriations committees of the Congress.

Office of Information

The Office of Information develops, plans, and executes the information policies and programs of the Department.

Information programs are designed to inform farmers, researchers, scientists, and the general public about the work of the Department. The information staff accomplishes this task through three medians:

Publications

Here writers and editors assist scientists and other subject-matter specialists with their manuscripts; edit and properly prepare material for publication; clear for policy; and arrange for printing and distribution. About 500 new Department publications are printed each year. Total annual distribution amounts to 35 million copies.

Current Information

Information specialists prepare press statements for daily, weekly, periodical and farm press; special reports and articles; radio and TV materials for use on network and local programs. The Department issues more than 3,000 press statements a year, an average of 12 to 15 per day. Background and current information material, including a tape recording service, is pro-

vided weekly to several hundred farm radio directors throughout the country. A television package program is sent weekly to 150 stations, and a consumer's television package goes semi-monthly to about 250 stations.

Visual Information

Staff members plan and produce motion pictures and news type photographs; design and create exhibits; produce illustrations and other art work. Some 65 agricultural and TV motion pictures are produced annually.

Office of Management Appraisals and Systems Development

The Office of Management Appraisals and Systems Development provides leadership to the Department's program for management improvement. It directs and gives technical guidance on the use of management appraisals, operations research, systems design, and automatic data processing.

Through the formulation of programs for effective and timely identification and analysis of problems relating to management effectiveness, the Office advances the use of scientific management principles.

Office of Management Services

The Department is continually seeking new organizational approaches to improve efficiency and reduce costs. One of the most significant changes made recently was consolidation of certain management support activities.

The Office of Management Services (OMS) was created to provide management support services for seventeen offices and agencies of the Department. Budget, personnel, information, procurement, property, space, and related management services are provided by OMS.

Office of Personnel

The Office of Personnel plays an important role in the daily activities of the Department's 100,000 employees. It develops and implements policies for a progressive personnel management program that is responsive to the needs of the Department.

Policies and procedures are formulated and issued in the areas of employment, position classification, performance evaluation, training, employee relations, recognition and incentives, and personnel records and reports.

Because of the size and complexity of the Department, the Office of Personnel is especially interested in identifying management needs for personnel data. The personnel data collected and analyzed by the Personnel Research Staff provides additional information which management can use to make quicker and better decisions on how to meet program objectives.

Office of Plant and Operations

The Office of Plant and Operations supervises and coordinates the overall management of (1) the housing of the Department's activities; (2) procurement of supplies, services, and construction; (3) supply and property activities; and (4) records, directives, and reports.

Such things as the leasing of commercial space negotiating contracts; storing, transporting and personal property; and maintaining the Department's motor vehicle fleet are examples of the activities carried on by the Office.

Employment Opportunities

The Staff Offices of the Secretary offer a unique opportunity for the graduate interested in a challenging career in administration. The staff offices provide the leadership and coordination necessary for the efficient management of the Department. In this environment, the graduate has an excellent opportunity to make important contributions to the effectiveness of the Federal Government.

Most graduates enter at the GS–7 and GS–9 levels. Promotional opportunities are excellent at all levels. The employee has an outstanding opportunity to advance rapidly to positions of greater responsibility and involvement in the great issues of our time. The availability of the numerous colleges and universities in the local area offer the employee the chance for further self-development. In addition, he may take advantage of the numerous in-service training and development courses offered by the Department.

If you are seeking an interesting and challenging job and want to play an important role in the administration of the Federal Government, the Department of Agriculture offers you a tremendous opportunity for growth and development.

Office of the General Counsel

■ The Office of the General Counsel (OGC) performs all the legal work for the Department of Agriculture. It was established as a part of the Office of the Secretary of the Department in 1905 and was accorded full agency status within the Department in 1935.

Before 1933, the principal functions of the Department had to do with research and scientific activities. Therefore, a relatively small group of lawyers and their clerical assistants were able to perform the legal work. With the inauguration of the many "action programs" by the Department, however, the type of legal work performed changed considerably.

Nature of Activities

The fields of law and program areas in the Department of Agriculture are discussed next.

Administrative Law

The Department administers more than 50 regulatory statutes—far more than any other agency in Government. These laws deal with all phases of the handling in interstate commerce of agricultural commodities and related products to prevent unfair practices, to insure orderly marketing, and to protect the public health, as well as to protect the animal and plant life of the country from the spread of diseases.

Lawyers in the OGC act as trial counsel in all administrative proceedings of an adversary nature.

Department lawyers serve as counsel for the Secretary of Agriculture in proceedings before other Federal and State regulatory bodies, including the Interstate Commerce Commission, Federal Maritime Board, Federal Power Commission, and State public service commissions.

Business and Corporate Law

Department attorneys serve as legal counsel to the Commodity Credit Corporation and the Federal Crop Insurance Corporation.

Lawyers who are assigned as counsel to these corporations handle an infinite variety of legal work that arises in dealings with large commercial enterprises. They also handle other legal problems that are peculiar to corporate agencies of the United States which operate under broad Federal charters and a complex body of statutes.

Legislative Drafting and Interpretation

Proposed legislation emanating from the Department of Agriculture is drafted in OGC. Its attorneys work with Congressional committees and their staffs in drafting bills. They also prepare Department reports on bills, participate in Congressional hearings, and interpret statutes for Department administrators.

Domestic Farm Law

Members of the office participate as legal advisers to Department officials in the development and administration of many varied and complex farm programs. These programs are designed to improve and protect farm income, dispose of surpluses, establish and enforce farm acreage allotments and marketing quotas, reduce surplus agricultural production, and facilitate orderly distribution and marketing of agricultural commodities.

Agricultural Credit

Lawyers perform a broad variety of legal services relating to loans made or insured by the Farmers Home Administration for the acquisition and improvement of farm real estate, farm operations, rural housing, and for the conservation and development of soil and water resources.

Utility Financing

Attorneys handle the legal work for the Rural Electrification Administration, which has more than $4 billion in outstanding loans to more than 1,700 borrowers, who own and operate electric and telephone systems.

In addition to the legal services that REA needs in making secured loans to qualified borrowers, the legal work covers the fields of corporate financing, municipal bond financing, and the construction and operation of electric and telephone systems.

Foreign Market Development

Department attorneys serve as counsel in the formulation and implementation of many programs involving exports and imports of agricultural commodities.

Forestry, Land, and Water Law

Members of the Office serve as legal counsel for the Department in its administration of the national forests, submarginal lands, and land acquisition programs. Attorneys give legal advice on the Nation's soil and water conservation activities.

The legal work relates to administrative proceedings, legislation, contractual matters, protection of forest properties, water rights, and the accquisition—including condemnation—of lands and interests in lands.

Management and Research

Lawyers perform legal services needed in managing the Department of Agriculture as an agency within the Executive Branch of the Federal Government—somewhat like "house counsel" for a major industrial corporation.

Patent Law

Department lawyers prepare and handle patent applications and represent the Department in all patent proceedings. Discoveries by Department of Agriculture research scientists result in more than 100 new patent matters each year. These include discoveries in chemistry, medicine, industry, electronics, and machinery.

Federal-States Relations

Many Department programs are complemented by similar programs in States. These programs raise important questions in Federal-State jurisdiction, in constitutional and statutory authority, and in other areas that require the balancing of State and Federal interests.

Career Opportunities

Each lawyer has an opportunity to engage in many legal functions that relate to his assignment. Attorneys give oral advice, write opinions and briefs, draft legal documents and regulations, draft and interpret legislation, and participate in hearings and trial work.

The entrance grades for attorneys in OGC are GS–9, under the Honors Program, and GS–7, under the regular recruitment program. The highest grade for attorneys, excluding the General Counsel, is GS–18.

Experienced attorneys work closely with the new attorneys to help them develop their fullest potential. Opportunities for advancement to higher grades are excellent for those whose performance merits promotion.

Most of the openings for new attorneys are in the Washington Office, although a few occur from time to time in the field service.

For additional information about the career opportunities for attorneys in the Office of the General Counsel, please contact:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Office of the Inspector General

■ The Office of the Inspector General (OIG) reflects the Department of Agriculture's response to various regulatory requirements of Congress for audit and surveillance activities which are, in turn, expressions of the interests and concerns of the general public.

Prior to the establishment of OIG in 1962, the major agencies of the Department had their own internal audit and investigation activities. The Inspector General, who reports directly to the Secretary, was given broad responsibility for direction of all internal audit and investigative activities throughout the Department of Agriculture. At the direction of the Secretary, the Inspector General addressed himself to the task of consolidating the separate audit and investigation units into a central staff organization.

OIG was created to increase the effectiveness of the Department's audit and investigation activities. The creation of this independent service was intended to provide essential Department-wide flexibility and maximize the effectiveness of the audit and investigative functions between and across agency lines. This central audit and investigation service now provides a highly professional, management-oriented responsiveness to the needs of the Secretary, agency administrators, and all other levels of management throughout the Department.

The Inspector General determines the need for and schedules comprehensive inquiries into the effectiveness and efficiency of Departmental organizations charged with the execution of the Department's programs or the administration of its affairs.

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OIG evaluates existing laws, regulations, procedures, and practices in the Department and insures prompt and thorough investigation of alleged wrongdoing followed by appropriate corrective action which recognizes both the rights of the employees of the Department and the right of the American public to honest and efficient Government.

Career Opportunities

The Office of the Inspector General is organized on the lines of a headquarters staff in Washington and seven regional staffs. The regional offices are located in:

- Kansas City, Mo.
- New York, N.Y.
- Temple, Tex.
- San Francisco, Calif.
- Atlanta, Ga.
- Hyattsville, Md.
- Chicago, Ill.

Interesting and challenging opportunities are available to those with education or experience in the field of law, accounting, economics, business administration, management engineering, or agricultural administration.

If you would like additional information about the Office of the Inspector General write:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Office of Rural Areas Development

■ The Rural Areas Development movement stresses self-help programs that unite the efforts of rural people, under their own leadership, to meet the urgent and growing economic and social needs of their communities.

The Secretary of Agriculture recently emphasized, "We must focus on people not programs, on communities not commodities."

There are 17 agencies of the U.S. Department of Agriculture represented on the Rural Areas Development Board, coordinated by the Office of Rural Areas Development (RAD).

Nature of Activities

Through RAD, agencies such as Farmers Home Administration, Forest Service, Farmer Cooperative Service, Rural Electrification Administration, and Soil Conservation Service—to name a few—are joining together to work with local communities. Committees are formed within the communities; they are assisted by Federal agencies, State agencies, and private enterprises to develop new skills and facilities for home, industrial, and recreational use of the Nation's waters and woodlands. Assistance is provided in helping the local people attract, locate, and develop new businesses.

The new "cash crops" of recreational farming are fast taking hold in country areas where there is an increasing demand for resorts and recreation facilities, including: ski runs, camp sites, hiking paths, fishing ponds, hunting preserves lakes for swimming and boating, hotels, and dude ranches. Thus, a whole new industry is being forged by people in rural areas where the pattern of life is changing.

All of these developments take time, money, and the ability to distinguish future needs from now-a-days demands, both urban and rural. All the local resources in rural America—where one out of every three Americans lives and works and expects to continue to do so—must be brought into this profitable and rewarding action.

Many rural areas are ready for this new economic breakthrough. Local leadership has been mobilized and citizen participation is high. Comprehensive plans for using local resources, both human and physical, were drawn up by local leaders in the light-of present and future needs. With new capital attracted into these areas, new jobs were created and facilities modernized.

Some concrete examples of this "new look" in country areas are seen in one rural area—Horry County, S.C.—where a thousand persons found jobs in new factories and other enterprises through the efforts of local people backed by loans and technical assistance from Federal agencies.

In another area—Johnson County, Tenn.—more than 300 new jobs were generated, and another 300 are in prospect, as a result of efforts of a local development committee working closely with the Departments of Agriculture and Commerce and other Federal and State agencies.

Bedford County, Pa., offers still another example. The local development committee raised, from private and State resources, financial backing for four industries that ultimately will provide jobs for 1,100 persons.

Work is being done also on equal opportunity programs through a working group that has as a basis for its operations this policy: Recognition of the severe handicaps under which racial minorities live and work in some regions. Provision for equal opportunities for all persons, regardless of race, creed, and color, for all its programs in all regions.

The task of developing rural areas is enormous. The skills required by various agencies of the Department of Agriculture to continue meeting the challenges of rural areas development run the gamut: in business management, from statistical and scientific research through engineering; in economics, from accounting through law; and in sociology, from demographic research through social psychology.

Some of these Department of Agriculture specialists work within the Washington, D.C., area, but many facilities are decentralized and job opportunities for some specialists are spread throughout the 50 States.

Career Opportunities

RAD, itself, is staffed by 33 persons in various specialities and is centered in Washington, D.C. At present, three of the staff are located outside of Washington; one in Little Rock, Ark., another in Montpelier, Vt., and another in Albuquerque, N. Mex.

This opening of new horizons through rural areas development, on the long pull, offers many challenges; opportunities for career growth with various Department of Agriculture agencies, including eventually RAD; and rewards both in personal achievement and in national economic growth.

Agricultural Marketing Service

■ As the challenge in American agriculture during the last century was in production—the challenge today is in marketing.

For while American farmers have become the world's most efficient producers, they still face many unsolved marketing problems. These problems include (1) how they can supply the vast quantities of uniform-quality products needed to meet the needs of today's mass-merchandising system and (2) how they can achieve the bargaining power needed to deal with the ever-increasing buying power of the large organizations with which they do business?

Nature of Activities

It is the job of the Agricultural Marketing Service (AMS) to help farmers solve these problems, and at the same time to help bring order and efficiency to the national marketing system for farm products to hold down the marketing costs which today take 62 cents out of each consumer's food dollar.

AMS is also charged with responsibility for protecting free and open competition in the marketing of farm products, and with providing means of sharing our abundant farm production with the undernourished and the underprivileged. AMS must keep pace with the changing needs of the Nation—both those of farmers and consumers—and with the changing nature of the marketing system. This requires an organization that is flexible, alert, and knowledgeable. New ideas, new viewpoints, and initiative are vital.

AMS provides services—standardization, inspection, grading, and market news; regulation; marketing research; and food distribution programs.

Many of these programs originated 25 to 50 years ago. But they must constantly be adjusted to meet the needs of today and tomorrow. In the standardization and grading work, for instance, there is constant need to develop new standards and to revise older ones to provide better measures of the marketability and value of farm products. Also, there is a constant need to develop more objective and more efficient ways of grading to keep pace with the increasing mechanization of processing.

Regulatory programs offer a challenge, as methods of marketing shift and new patterns of trade develop. In livestock marketing, for instance, it once was enough to supervise the large terminal stockyards. Now, the challenge is to protect the financial interests of farmers and marketers in transactions that take place at thousands of scattered farms and hundreds of small auction markets.

Marketing research is a limitless field. Some of the problems that are now being tackled are:

- Finding ways of reducing the number of times food and fiber must be handled, sampled, and graded before it reaches the consumer. Some products are how handled 20 times on their way through the marketing system.
- Finding ways to reduce the waste and spoilage during marketing; at present, the loss of perishable farm products is equivalent to the produce from 1 out of every 5 acres.

- Finding ways to reduce the 1 billion dollars annual loss now caused by insects attacking farm products during the marketing process.
- Finding better and more objective methods and instruments to measure the quality of farm products.
- Finding ways of reducing the cost of transportation; this item alone takes up a big share of the consumer's dollar.

Food distribution programs have taken on new meaning in recent years as our Nation has become increasingly aware that even here there were people who were not getting enough to eat. The challenge to make our bountiful farm production more readily available to the undernourished both at home and abroad is a continuing one. One of the newest methods now being tried is the Food Stamp Program, which helps low-income families to extend their food dollars and to obtain a more adequate diet.

The National School Lunch Program, which began about 30 years ago, now benefits one-third of the Nation's school children. But there is a need to find ways of extending these benefits to still more children—both in this and other countries.

In short, AMS constantly faces new and bigger problems in carrying out its mission of improving the marketing of farm products. Much has been accomplished in the past 50 years of organized effort in this field—but much more remains to be accomplished.

Career Opportunities

Many more qualified people are needed to work on the frontier that is marketing today—to help solve the problems and the challenges that face today's farmer and to help improve the marketing system that affects the life of every person in this country.

Those who work with AMS are stationed all across the country, close to the people they serve. The agency is a highly decentralized but tightly managed organization comprised of 20 divisions, through which it directs the activities of about 8,000 employees, 85 percent of whom are located in some 560 field offices. These offices are generally operated by from one to a half dozen people.

In much of its work, AMS cooperates with State departments of agriculture, trade organizations, producers, and others engaged in handling, transporting, and distributing farm products.

AMS personnel, therefore, come into contact with a wide variety of individuals and a wide variety of work. The agency needs and employs persons with many different types of academic training and work experience.

Currently, the Service needs persons majoring in marketing, economics, horticulture, animal husbandry, entomology, biological sciences, engineering, journalism, and a number of other fields. Such people can qualify for jobs as marketing specialists, agricultural commodity graders, engineers, biological scientists, economists, writers, management specialists, etc., at grade levels ranging from GS–5 through GS–18.

The majority of new employees are hired at entrance grades GS–5 through GS–11, depending on training and experience. On-the-job training is given all new employees, and special additional training programs are provided when needed. The opportunities for advancement are excellent, but depend primarily upon the ability of employees to take on additional responsibilities.

Agricultural Research Service

■ Agricultural research is one of the hidden but vital forces that affects everyone's life each day. It may be evident in the form of a wash-and-wear cotton shirt, an aerosol spray "bomb," or the reconstituted orange juice you had for breakfast. These are all results of projects conducted by the Agricultural Research Service (ARS).

ARS is the largest agency within the Department of Agriculture and probably the largest civilian research agency in the world. More than 16,000 people are employed by ARS on a full-time basis. Close to 3,000 of them, representing 35 scientific specialties, are engaged in research work.

The future of agriculture in the United States depends in large measure on agricultural science and scientists. We must see that our total scientific effort maintains our world leadership in agriculture, for the plight of many newly emerging nations shows the importance of agriculture to the total economy of a nation. The objectives of ARS, which are determined by this goal, are to protect gains already achieved, improve the balance of agriculture, and guarantee abundance for future Americans.

Nature of Activities

ARS coordinates scientific research programs within the Department and conducts fundamental, applied, and developmental research in the production and utilization of agricultural products, home economics, and human nutrition. It also administers control and regulatory programs closely related to this research. Much of the work is done in cooperation with State agricultural experiment stations, State departments of agriculture, and related organizations.

The work of the Agricultural Research Service is extremely diversified. Research is conducted on methods to improve the production and breeding of animals and plants; means to develop practical methods for destroying the harmful insects and permit the increase and spread of beneficial ones; problems of concern to soil and water conservation; agricultural engineering problems designed to improve the use of power, labor, machines, and materials in farming; clothing, textiles, and household equipment; consumer and food economics; the nutritional requirements of people; and on problems designed to discover new or improved methods of utilizing agricultural commodities of all types.

Within these broad areas of research, highly specialized studies are conducted in both basic and applied research. In resent years, ARS has emphasized its basic research by establishing pioneering research laboratories that conduct work on mineral nutrition, plant physiology, plant virology, insect pathology, insect physiology, blood antigens, animal genetics, microbiological chemistry, chemistry of animal proteins, allergens in agricultural products, plant fibers, seed proteins, plant enzymes, cellular metabolism, and physics of fine particles.

ARS also administers the laws and regulations pertaining to the production of veterinary biologics; inspection of meat and meat products; eradication and control of plant pests and diseases; plant inspection and quarantine; and the effectiveness of pesticide products and the correctness of their labels.

Career Opportunities

The staff required to conduct these programs is extremely varied. Persons with training in all of the life sciences and most of the physical sciences are represented. Among the professional employees in various programs are:

Crops Research.—Agronomists, pathologists, nematologists, horticulturists, geneticists, physiologists, chemists, botanists, and range conservationists.

Entomological Research.—Entomologists working in various specialized fields of entomology, physiologists, pathologists, chemists, and bacteriologists.

Soil and Water Conservation Research.—Soil scientists, microbiologists, agricultural engineers, chemists, and physicists.

Livestock Research.—Veterinarians, chemists, geneticists, physiologists, animal nutritionists, and animal, poultry, and dairy husbandmen.

Nutrition and Consumer-Use Research.—Chemists, physicists, bacteriologists, physiologists, nutritionists, architects, statisticians, and home economists.

Agricultural Engineering Research.—Agricultural engineers with specialized training in such fields as farm machinery, farm electrification, and soil and water.

Utilization Research.—Chemists, physicists, microbiologists, and engineers.

Animal Regulatory Work.—Veterinarians, chemists, pathologists, and microbiologists.

Plant Regulatory Work.—Persons trained in the biological sciences with emphasis on plant sciences and entomology.

These professionals are employed in grades GS–5 through GS–18. In the research area, persons with bachelor's degrees, without experience, enter at grades GS–5 and GS–7; persons with master's degrees at grades GS–7 and GS–9; and those with doctor's degrees at grades GS–11 and GS–12. The higher grade in each instance is available to persons who have demonstrated superior scholastic ability.

Advancement opportunities in the Agricultural Research Service are excellent for those who demonstrate initiative and ability. Merit promotion plans, tailored to meet the varying requirements of different occupational groups and work situations, are in operation throughout the Service. In-service training is conducted by rotating job assignments and through the use of seminars, meetings, and other means for exchanging scientific information and ideas. Every encouragement is offered to employees with bachelor's and master's degrees to continue their formal graduate training on a part-time basis. This can be done through adjusting work schedules or by granting employees leave to work on their doctor's degrees.

Research is conducted in an environment that is particularly favorable to scientific study and exploration. Much of it is done in large, modern, specially designed, well-equipped laboratories and greenhouses. Well-developed experimental lands, animal barns and shelters, and special-purpose buildings, facilities, and equipment are provided in many locations throughout the country. A high proportion of these are at or near educational centers because much of the Service's research is conducted as joint cooperative efforts with State universities or State agricultural experiment stations.

To the maximum extent feasible, ARS scientists are provided with supporting personnel, services, and facilities to aid them in their work.

Workers in the regulatory programs are headquartered in more than 500 cities and towns in the continental United States and in Puerto Rico and Hawaii.

Employees of ARS enjoy an unusual opportunity to do interesting, challenging, and important work in association with world scientific leaders. They work in an atmosphere designed to promote a sense of personal accomplishment in the advancement of agriculture.

Agricultural Stabilization and Conservation Service

■ In a world where food is often scarce and millions of people go hungry, the United States finds itself in the unique position of managing an agricultural abundance. The Department of Agriculture has the responsibility for helping farmers manage this abundance for the good of all people. Through the agricultural programs it administers, the Agricultural Stabilization and Conservation Service (ASCS) plays the dominant role in the Department's effort to manage this abundance.

Nature of Activities

The major programs of the Service are agricultural conservation, price support, supply adjustment, storage, loans, procurement and sales operations, national defense planning, and farm disaster assistance. These programs which benefit both farm and city people are authorized by the Congress. Their objectives are: (1) to continue production of food and fiber at reasonable prices and in quantities sufficient to meet the needs of all Americans, (2) to enable farm operators to earn incomes more nearly comparable to those earned in nonfarm occupations, (3) to conserve our land and water resources, and (4) to adjust and balance the supply of farm products in serious over-supply. Such farm programs bear directly on farm prosperity; farm prosperity bears directly on business prosperity. As farm income improves, farmers buy more feed, farm machinery, gasoline, tires, transportation vehicles, fertilizers and pesticides, materials for repair and construction of buildings, as well as food, clothing, household furnishings, and other equipment. Farm prosperity also bears directly on employment in a host of farm-related and other industries. In fact, more than a third of the total work force in the United States is directly affected by farm income and production.

ASCS handles the supply management job of the Commodity Credit Corporation (CCC), a unique Government corporation that acquires, stores, and sells farm commodities valued at billions of dollars. This work is directed toward protecting the producers from some of the price uncertainties over which they have no control. Activities carried on by the Agricultural Stabilization and Conservation Service for the CCC include the price support, commodity stabilization, storage-facilities, supply and foreign purchase, commodity export, and surplus sales and distribution programs. In terms of impact on the national economy, the most important of these are the price support and commodity stabilization programs. The Service also conducts financing and operating functions concerned with the International Wheat Agreement and export sales for foreign currencies.

The Service deals on a day-to-day basis with hundreds of thousands of producers, processors, carriers, exporters, handlers, warehousemen, and others.

Electronic data processing equipment, such as the centralized accounting programs for price support and storage inventory, is utilized for much of the work. This equipment is located at two centers—one at New Orleans, the other at Kansas City.

One of the most important of the agricultural programs authorized by Congress to stabilize supplies is that of production adjustment through agricultural acreage allotments and marketing quota programs. Acreage allotments are used to help bring into balance the production of five "basic-crops"—cotton, wheat, rice, peanuts, and tobacco. When supplies are larger than normal, as defined by law, marketing quotas are used, subject to the approval by vote of two-thirds of the producers of the crops involved.

Local committees composed of and elected by farmers help to carry out ASCS programs. The use of these committees follows the tradition of giving the citizen a voice in and responsibility for agricultural affairs. This tradition has survived the technological revolution in agriculture and the political, social and economic changes in the Nation. Farmers place great confidence in the ability and integrity of elected local committeemen. Such tradition and confidence led the Congress to give farmer committees extensive responsibility for running local farm programs. The farmer (ASC) committees operate within official regulations designed to carry out Federal laws. However, within the regulations they apply their judgment and knowledge and arrive at their own decisions. ASC committees have many duties and responsibilities. For example, in production adjustment they determine the size of individual farm acreage allotments each year, establish normal yields on farms, consider complaints of producers, supervise the referenda on marketing quotas, and determine penalties and adjustments. In conservation, they formulate local programs, review farmer requests for cost-sharing, and recommend changes in State and National programs.

Career Opportunities

ASCS administers these nationwide programs through commodity offices and State and county offices located in the 50 States and Puerto Rico.

Because of these varied programs and wide geographic distribution of activities, many interesting job opportunities exist within ASCS. Some of these positions are agricultural in nature. These include agricultural marketing specialists and warehouse examiners. Other positions are in administration and management; still others, such as digital computer systems analysts and computer programmers, have been created by the need for commodity and management data.

Commodity Exchange Authority

■ The buying and selling of commodities on the trading floors of the Nation's commodity exchanges provides open and competitive prices which are vital to the successful functioning of the American economic system.

The futures markets, conducted by such commodity exchanges as the Chicago Board of Trade and the New York Cotton Exchange, stand at the center of the marketing system for a number of farm commodities. Therefore, farm and food trade people across the country watch closely the prices of "futures" registered in these markets.

Prices registered on the trading floors of large grain exchanges set the pace in the marketing of wheat, corn, soybeans, and certain other commodities at points throughout the United States.

Nature of Activities

Futures prices are registered when traders make purchase and sale contracts to deliver a commodity in a period ahead—in a May, July, December or other futures-delivery month. Futures prices are thus not only guides for today's marketing, they also give market opinion of prices in the months ahead.

It works like this. A farmer gets the latest Chicago corn futures price from his radio, television, or newspaper. From this futures price he can determine the going price of cash corn at a nearby elevator, taking into consideration transportation and handling charges. If he thinks the price is favorable, he may decide to sell. If the price has declined, he may hold off. In this way, the prices registered in futures markets serve as base prices in guiding farmers' marketing decisions—whether to sell now, to put a crop under a price support program, or hold for later sale. Having the latest futures prices helps the farmer keep his marketing decisions in his own hands and helps him stay in a competitive position.

If trading on commodity exchanges is not conducted according to equitable rules and practices which are constantly enforced, unfair practices or shrewd operations may distort or depress farm prices, or open the way to price manipulation or market corners.

Why Regulation Is Needed

In the early period of futures trading, in the 1870's and 1880's, speculative excesses and abuses of futures trading sometimes outweighted its economic services. Big speculators and market leaders openly paraded their power over prices. There were so many market corners and price manipulations that many people thought of the futures markets as gambling institutions rather than as aids to marketing. There developed a strong demand for Federal regulation of futures trading, coming mainly from farmers and farm organizations. Basic provisions of the present Commodity Exchange Act were enacted by the Congress in 1922, and strengthened and extended in 1936 and since then.

The CEA which administers the Commodity Exchange Act, was established in 1947. It was preceded by the Grain Futures Administration (1923–36) and the Commodity Exchange Administration (1936–42). Its work was consolidated with other Department agencies from 1942 to 1947.

Regulating the Markets

Under the Commodity Exchange Act, the operation of futures markets in regulated commodities and dealings in futures by commodity brokers are privileges that may be exercised only on the basis of Federal licensing and registration.

This means that it is unlawful in the United States to conduct a futures market in regulated commodities except on an exchange that has been designated under the act as a "contract market."

Currently there are 17 commodity exchanges designated as contract markets, including the Chicago Board of Trade, Chicago Mercantile Exchange, Minneapolis Grain Exchange, Kansas City Board of Trade, New York Produce Exchange, New York Mercantile Exchange, New York Cotton Exchange, and New Orleans Cotton Exchange.

The nature of commodity exchanges is such that most of those who trade must do so through brokers. This means they must necessarily place a high degree of trust and confidence in brokers. The Commodity Exchange Act requires the annual registration of all brokerage firms—futures commission merchants—and all floor brokers executing orders for others on the floor of an exchange.

The framers of the act clearly granted, and the courts sustained, regulatory power to the CEA to examine at any time the books and records of contract market members and the operations of traders.

Supervision of trading now covers 17 commodities for which one or more exchanges are conducting markets. These are wheat, corn, oats, rye, grain sorghums, barley, flaxseed, soybeans, cotton, wool, wool tops, eggs, potatoes, cottonseed oil, soybean oil, cottonseed meal, and soybean meal.

CEA officials enforce limits on speculation in wheat, corn, oats, rye, soybeans, cotton, and shell eggs. These statutory limits on the holdings and daily trading of large speculators help to curb unwarranted price movements, and enforcement of these limitations is an important part of the day's work in CEA.

Safeguarding Hedging

Futures trading provides another essential marketing service—hedging. This is nonspeculative trading in futures to protect actual handlers of commodities from losses because of price fluctuations.

Many commodity firms, merchants, farmer cooperatives, and some individual farmers make hedging sales in futures to reduce risks in actual commodities owned. Merchants and processors needing an actual commodity may make hedging purchases in futures to reduce price risks on forward sales of cash commodities or byproducts. One of CEA's jobs is to safeguard commodity hedging facilities so that the competitive markets are able to shoulder a more substantial part of the cost of carrying commodities.

Enforcement of the Regulations

CEA investigates possible violations of the Commodity Exchange Act and takes corrective steps if evidence of violations is found.

The principal duties of CEA people are: 1) to prevent price manipulation and market corners; 2) to prevent the dissemination of false and misleading crop and market information affecting commodity prices; 3) to protect market users against cheating, fraud, and abusive practices in commodity transactions; 4) to safeguard handling of traders' margin money and equities by preventing the misuse of such funds by brokers; and, 5) to insure the benefits of exchange membership to farmer cooperatives. CEA employees also are responsible for conducting investigations of trading and market operations, and for providing information, statistics, and reports to the public on trading and marketing and on conditions that affect the markets.

Employment Opportunities

CEA is a comparatively small agency and therefore has a limited number of job vacancies. During the next fiscal year, the agency plans to recruit a few college graduates for positions as commodity analysts (economists) and accountants.

For additional information about CEA and the career opportunities it offers write:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Cooperative State Research Service

■ State agricultural experiment stations contribute to the Nation's high living standards through research related to agriculture, home economics, human nutrition, and marketing.

Federal and State scientists work constantly to improve production efficiency by helping farmers provide the quality and varieties of food and fiber the consumer needs and expects.

The average consumer in this country now spends only 19 percent of his disposable income for food, in contrast with about 23 percent 10 years ago. A major portion of this saving is attributable to the application of research findings to agriculture. This has given consumers an abundance of food and fiber in an acceptable form and at very reasonable prices.

Although closely cooperative with Federal research activities, State agricultural experiment stations are strictly State-administered.

State stations, under existing legislation, are responsible (1) for scientific investigation aimed at increasing basic knowledge and (2) for conducting problem-directed research under which existing knowledge is used to solve immediate problems.

Nature of Activities

Federal support through the Cooperative State Research Service (CSRS) permits extensive research on local and regional problems.

The Hatch Act holds the Secretary of the U.S. Department of Agriculture responsible to Congress for proper use of Federal-grant funds in the States. He delegated this responsibility to CSRS. Its work is primarily that of assistance in coordinating research between the stations and between stations and the agricultural research of the U.S. Department of Agriculture. This eliminates unnecessary duplication of research.

The Service's staff provides technical leadership for scientific workers in various research areas. Such assistance includes review of Federal-grant and State research, analysis of work progress and results, and review of publications and reports. Publication and dissemination of research findings are essential parts of the experiment station program. Before a research project gets Federal-grant support, it must be approved by both the experiment station director and CSRS.

Information growing out of this system of cooperative scientific work has helped American agriculture reach its present high degree of efficiency. It has helped farmers provide better products at lower cost and the high standard of living Americans enjoy today.

Formerly known as the Office of Experiment Stations, CSRS was established in the U.S. Department of Agriculture in 1888. As now organized, it has four major divisions: (1) Agricultural Economics, Marketing, and Rural Life Division; (2) Animal Science Division; (3) Plant Science Division; and (4) Utilization, Home Economics, and Human Nutrition Division. The administrator is responsible to the Secretary of Agriculture and also participates ex officio in national and regional meetings of the Experiment Station Section of the Association of State Universities and Land-Grant Colleges.

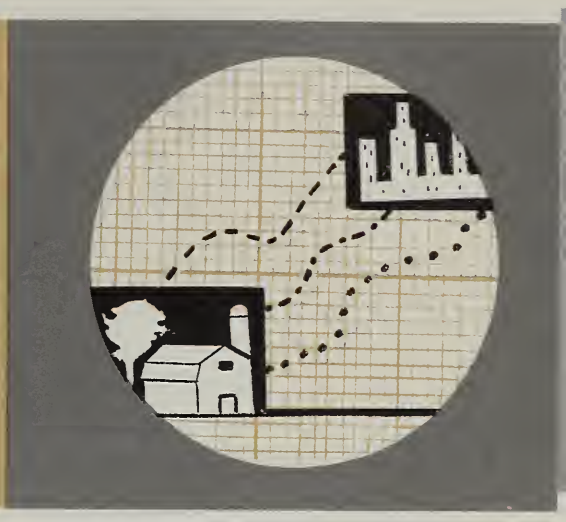
CSRS maintains a central file of all Federal-grant, State-supported research projects. Summary cards for all projects on record are duplicated and made available to each station so that scientists have readily available information on current projects.

The McIntire-Stennis Cooperative Forestry Act authorizes the Secretary of Agriculture to provide grants for forestry research to land-grant colleges and experiment stations and to other State-supported colleges having forestry schools and offering graduate training in the sciences basic to forestry. The payments are administered by the Cooperative State Experiment Station Service.

Employment Opportunities

The technical staff of the Service is composed mainly of agricultural research people. Applicants for these positions normally have their doctor's degree and experience in agricultural research and administration. Therefore, recruitment for these positions is usually directed toward people engaged in research within USDA and the State experiment stations.

Economic Research Service



■ How adequately will Americans be eating in 1980 when it is predicted the population will reach 260 million people? Is food one of the best bargains available to the consumer? Just how efficient are American farmers? Why is two-thirds of the world underfed?

Finding the answers to these and many other vital questions is the work of the Economic Research Service (ERS).

In recent years the economic problems in agriculture have overshadowed the problems of a physical nature, such as drought and diseases. Therefore, the Department of Agriculture has increasingly brought the techniques and tools of economic research to bear on problems of economic maladjustment.

Nature of Activities

Agricultural economic research traces back to early farm management work and has been conducted in various units of the Department of Agriculture since 1905. ERS, the agency now responsible for this work, was established in 1961. The Service conducts research programs in agricultural production and marketing economics, in both domestic and foreign commerce.

The work of agricultural economists in ERS falls into 5 main categories: farm production economics, resource development economics, economic and statistical analysis, marketing economics, and international agricultural economics.

Career opportunities are available in all of these areas of research for properly trained and qualified young people.

Farm Production Economics

Research on the economics of farm production includes the economics of organization and management of farms; adjustments in production to prospective demands and changing technologies; appraisals of costs and returns on farms representative of important types, sizes, and locations, and the appraisal of costs of producing important commodities; development of measures of farm output and productivity; problems of farm size and capital requirements; financing of farm enterprises; taxation, insurance, and land values; and appraisal of alternative agricultural production policies and programs.

Resource Development Economics

In this field, research is concerned with the development, use, and management of the Nation's land and water resources and particularly the changing rural economy and institutional structure. It includes rural economic development; improvement of income opportunities in depressed rural areas; rural renewal; analysis of river basin and watershed programs, land tenure, and resource organization, institutions, and policy.

Economic and Statistical Analysis

Domestic economic analysis is concerned with identifying, measuring, and analyzing the factors affecting demand, supply, and price of agricultural commodities; relationships between the agricultural sector and the national economy; farm income and the income of the farm population; demand and consumption of farm products; long-term projections of economic growth and

farm products demand; farm population manpower and levels of living; and historical developments in the policies, programs, and organization of the Department.

Marketing Economics

ERS is concerned with the marketing of farm products from the time they leave the farm until they reach the consumer. Studies are conducted on market structure and costs and margins in the marketing system; on the potentials for market expansion of agricultural products; on the movement of agricultural products through marketing channels; on the economic aspects of public distribution programs such as school lunch, food stamp, and direct distribution programs; and on ways of increasing efficiency and reducing costs in the marketing of crops and animal products.

International Agricultural Economics

ERS analyzes and interprets world conditions and developments affecting foreign markets for U.S. farm products. Research is conducted on the forces affecting supply, demand, and trade in farm products in more than 100 countries, and the impact of these forces on U.S. agricultural exports and potentials for increasing them. Analyses are made of trade policies of foreign governments and of international bodies to determine the impact of those policies on international trade in farm products.

The Service in collaboration with the Foreign Agricultural Service compiles world summaries of statistics on agricultural production, trade, and consumption which provide information and assistance to exporters of agricultural commodities to other Government agencies, and to the public.

Farmer Cooperative Service

■ The work of Farmer Cooperative Service (FCS) touches on the lives of four out of five farmers in the United States who are members of cooperatives. This work includes research, service, and education for marketing, farm supply, and business service cooperatives.

Research

The foundation of the FCS program is research on such aspects of farmer cooperation as organization, financing, management, accounting, merchandising, membership, and transportation.

Some recent research studies by FCS staff covered such areas as: livestock pooling, joint product selling by several cooperatives, improving peanut marketing, and identifying new practices and services farm supply cooperatives should furnish.

In addition to being useful to cooperatives, research results often are useful to other businesses. For instance, studies of business management and management accounting for small processing firms can help managers improve their decision-making skill, regardless of their form of organization.

Advisory Service

Research work is not complete unless it is put to use. Members of FCS staff in advisory capacities rely on their research findings to assist cooperatives on such problems as consolidation and operation, warehouse efficiency, and organizational structure.

This advisory work results in greatly improved service to farmers while providing them with substantial savings—in cooperation with land-grant colleges and universities.

Education

The third responsibility of FCS is education in sound cooperative principles and practices. It disseminates findings of its studies in reports; in its monthly periodical, News for Farmer Cooperatives; in talks; at workshops and clinics; and through many other outlets.

The staff provides source material for representatives of cooperatives and general farm organizations, extension workers, teachers and research workers at universities, foreign students, and others interested in farmer cooperatives.

Who Benefits

Farmer Cooperative Service helps farmers in the United States develop and operate sound, effective marketing, purchasing, and related service associations.

A cooperative owned and controlled by its farmer members is one of the best methods the present-day farmer has of achieving bargaining strength in the market economy and hence, an important means of improving his economic situation.

As the farmer benefits, so do others. The community benefits because the farmer usually spends his money there. Cooperatives employ people to run their business who also patronize the home town. The consumer benefits, too. When the farmer, through his cooperative, is able to

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reduce production and marketing costs, he helps keep the costs down.

In addition to helping U.S. farmer cooperatives increase their business efficiency, FCS provides information on agricultural cooperatives to some 600 foreign trainees each year. It also gives information and publications containing results of FCS research on cooperatives to the Peace Corps, the Agency for International Development, U.S. Information Agency, and others for use in their oversea programs.

What FCS Work Requires

Careers in FCS cover a wide range of services to farmers and their cooperatives and require a specialized knowledge and background since cooperatives embrace nearly every kind of agriculture, every type of farm product, every kind of farm supply used, and an increasing number of services farmers get cooperatively.

As examples, FCS staff carry on research on specific cooperative problems—management, accounting, financing, and member relations, as well as on operating problems and techniques in specific commodity or supply fields—dairy, feed, petroleum, livestock, and the like.

FCS also makes studies on broad aspects of cooperative and commodity-type operations. All these studies require considerable knowledge of business administration and modern management for effective business enterprises.

A career in FCS thus requires more than one specialization—a staff member may have a good background in livestock, but for work with the Service he must also know the cooperative and economic framework in which a livestock association can operate most efficiently.

Advisory studies require still other attributes—those of being able to develop recommended plans of action and being able to present these suggestions in an effective way to farmer boards of directors and employees of cooperatives.

FCS's work thus requires well-rounded, adaptable individuals, people with a background of agricultural economics and research, and people with the ability to communicate effectively in written reports and in talks.

All these attributes help in the designated job.

Job Opportunities

The FCS professional staff is composed of about 50 agricultural economists employed in Washington, D.C., since FCS has no branch offices.

Staff members are required to travel to maintain effective contacts with cooperatives, agricultural colleges and universities, extension services, experiment stations, farm leaders, and others.

FCS makes appointments from the Civil Service Commission register of applicants eligible under its examination for agricultural economists (Announcement No. 303B).

Excellent opportunities for advancement in Farmer Cooperative Service exist for those who demonstrate aptitude and ability on the job.

For additional information about career opportunities in FCS, write or visit

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Farmers Home Administration

■ Over the past quarter century approximately 2 million farm families have borrowed about $7 billion from the Farmers Home Administration (FHA) and its predecessor agencies to equip, operate, and buy farms. Principal and interest repayments to date total over $5.5 billlion. Most of the amount outstanding has not fallen due and losses on principal have been considerably less than the interest collected. All of these farm families, at the time they borrowed from the Federal lending agencies, were unable to obtain the funds they needed from other credit sources.

Nature of Activities

FHA provides farmers with credit for improving their farming operations or for becoming farm owners. It furnishes individual farmers with guidance in sound farm and home management, including credit counseling, when needed.

The program of loans and other services to farmers began in the mid-1930's.

Important legislation down through the years has broadened and modernized the Government agricultural credit services of FHA.

Through its history of more than 25 years, this agency has continued to be guided by two basic and important characteristics that differ from those of most other credit services that are available in the local community: (1) its credit services supplement but do not compete with those provided by other lenders, and (2) individually tailored farm and financial management assistance accompanies each loan.

FHA, through loans and technical assistance in farm and money management, helps family farmers obtain the resources they need for successful farming. The agency also makes loans to help nonfarm families in rural areas and small towns secure better housing and adequate supplies of clean water. Through this activity, FHA is an important tool of the Rural Areas Development program of the U.S. Department of Agriculture.

In addition to providing supervised credit to borrowers, FHA assists those applicants not eligible for loans in determining their credit needs; this assistance includes working out debt repayment schedules and solving other financial management problems.

Supervised credit helps farm families acquire the resources and skills they need to improve their operations, raise their standards of living, increase their incomes, and participate in new agricultural enterprises. This assistance, in turn, stimulates business activity in neighboring towns and, in general, helps the farm families and the communities of which they are a part make an important contribution to the strength of the Nation's economy.

FHA is composed of a national office staff in Washington, D.C., 43 State offices, and approximately 1,500 county offices serving the 50 States, Puerto Rico, and the Virgin Islands. A county supervisor, trained in farm and financial management, is in charge of each office. These field officials receive applications, make loans, assist borrowers with planning and carrying out farm and home plans, render farm purchase and development assistance, advocate soil and water conservation practices, receive payments, and

handle other phases of local program administration.

Farmers Home Administration County Committee

A county or area committee composed of three local farmers meets from time to time to assist and advise each FHA county supervisor on various aspects of the loan programs.

Kinds of Loans Made

Loans are made from funds provided by Congress or from funds advanced by private lenders on an insured basis.

FHA loaned farm families and other rural people about $800 million in fiscal year 1963. Approximately 45 percent of the total loaned went for farm operating expenses; approximately 30 percent for the purchase, development, or enlargement of family farms; and about 23 percent for the construction and improvement of houses and service buildings on farms and in rural communities.

Approximately 227,000 families were using FHA credit during the 1963 fiscal year.

Loans may be made to (1) buy livestock and equipment and pay farm and home operating expenses; (2) finance recreational enterprises which will supplement farmers' incomes; (3) build and improve rural homes and essential farm-service buildings; (4) purchase and develop farms and refinance debts; (5) produce trees and other forestry products; (6) build housing for farm laborers; (7) provide rental housing for senior citizens; (8) develop watersheds; (9) help individuals and groups of farmers and rural residents to develop water-supply systems for irrigation, household use, and livestock use and to drain farmland and to carry out soil-conservation measures; (10) produce fish under controlled conditions; and (11) meet emergency credit needs of farmers suffering from a natural disaster, such as hail, flood, or drought. Applications for credit and outstanding loans are serviced in the county offices.

Types and Levels of Jobs

Attractive and challenging career opportunities exist in several branches of farm management supervisory work. Attractive careers also exist for agricultural and civil engineers, accountants, and personnel and management technicians. Career opportunities are also available for clerk-typists and clerk-stenographers and administrative personnel, who help to carry out the functions of the agency.

Advancement and Training

New employees in the farm management supervisory work and in other entrance level positions are offered a wide variety of opportunities for advancement. A comprehensive on-the-job training program is given each new employee to develop his full level of competence in the shortest possible time. Accelerated training programs provide early promotion opportunities for new farm management supervisors. Promotional opportunities in professional, administrative, and clerical fields are continuous and are based upon demonstrated ability and willingness to accept additional responsibilities.

Working Conditions and Environment

At all locations employees are working under the agency mandate to strengthen family farms and rural communities. At the county office level there is daily contact with farm people and business establishments in the immediate area. Employees generally use their own automobiles and are adequately reimbursed for expenses.

Certain positions at the State and National office level require travel, as needed, to administer the FHA programs. Employees who travel are reimbursed for transportation and other travel expenses.

FHA employees work in modern, well-equipped offices. On-the-job training and in-service short courses and correspondence courses for self-development are available to aid employees in their careers.

For additional information about FHA and the career opportunities it offers, contact:

Director
Personnel Division
Farmers Home Administration
U.S. Department of Agriculture
Washington, D.C., 20250

Federal Crop Insurance Corporation

■ The need for insurance protection for crops goes back to the first man who planted a crop and then saw his work destroyed by the weather or insects or plant disease. In 1788, Benjamin Franklin wrote: "I have sometimes thought that it might be well to establish an office of insurance for farms against the damage that may occur from storms, blight, insects, etc. A small sum paid by a number would repair such losses and prevent much poverty and distress."

In 1938, the Federal Crop Insurance Corporation (FCIC) was established by an Act of Congress as a wholly Government-owned corporation. The inability of private insurance companies to provide all-risk coverage and the severe droughts of the 1930's made it apparent that only the Federal government had the financial resources to operate a successful all-risk crop insurance program.

Because most farm income is derived from the sale of crops, FCIC payments in bad years are often the only cash available to farmers. It follows that when farm income is drastically reduced by crop destruction or damage, the entire national economy suffers. By helping to soften the economic blows which affect not only farmers but every segment of the economy, FCIC serves not only agriculture but also the entire Nation.

Nature of Activities

The Federal crop insurance program provides a business way for farmers to protect their investment in crops. It is based on sound business principles, and requires farmers to pay premiums for the protection against loss from plant disease, insects, wildlife, fire, and weather conditions.

Public Relations and Sales

Public relations and advertising contacts are made with newspapers, radio, and television stations and other media, and with farm and civic organizations. The Corporation has a few positions which specialize in sales promotion and training.

Program Research and Development

The Corporation conducts research to develop insurance programs for new crops and to expand present crop programs to other areas. Crop insurance is similar to commercial insurance in that it must be sold to the farmers and is not a subsidy program. It is not available in all counties nor on all crops.

Actuarial Data

The insurance premium rates are developed by the Corporation's actuarial organization and are based on statistical experience data. These data include history on the crops to be insured. They indicate losses from bad weather and other catastrophes and past crop yields.

Loss Adjustment

Individual crop inspections are conducted throughout the growing season to determine if the provisions of the insurance policy or contract are being met. After harvest, the actual adjustment of losses is performed to determine whether the loss occurred from a cause covered by the policy or from some uninsured causes, such as poor farming practices. Adjusters appraise separately any proportion of the total crop left in

the field, lost from uninsured causes, or harvested. They must explore all sources to determine that they have found the total crop production before loss adjustment can be completed.

Career Opportunities

The Corporation insures 22 specified crops, including certain fibers, grains, fruits, and vegetables. The Corporations' program is conducted in approximately 1,200 counties in 38 States. In addition to an accounting and billing office in Kansas City, Mo., and the staff office in Washington, D.C., there are 23 State offices having jurisdiction over one or more States. The Corporation has approximately 2,000 full-time and intermittent employees.

Types and Levels of Jobs

The Corporation offers positions for fieldmen and supervisors in grades GS–5, GS–7, and GS–9. There is a career ladder for promotion to various supervisory and administrative positions from grades GS–11 to GS–14. Other positions in the Corporation include agriculturists (insurance analysts), sales trainers, writers and editors, research and program specialists, loss adjustment and sales management specialists, ranging in grades from GS–7 through GS–15. Most of the positions are located in towns and rural areas in the States in which crop insurance is offered. The duties of the majority of the field office positions are performed out of doors.

Where and How to Apply

Applicants may qualify for career positions in the field offices of the Corporation by receiving an eligible rating in an examination for Crop Insurance Fieldman, GS–5, and Crop Insurance Supervisor, GS–7 and 9, offered throughout the country by the U.S. Civil Service Board of Examiners. Graduates with bachelor degrees in agricultural economics, agronomy, soil science, or related fields and with 6 months of appropriate experience may qualify for Crop Insurance Fieldman, GS–5. The GS–7 and GS–9 positions require 1 and 2 years, respectively, of appropriate specialized experience, in addition to the bachelor degree. Applicants may also qualify for other positions in the Corporation by means of the U.S. Civil Service Commission's Federal Service Entrance Examination.

Training

Applicants receive appointments through the Corporation's own examinations, through the Civil Service Commission's Federal Service Entrance Examination, or by transfer from other Federal agencies. Appointees are given training in the appropriate crop insurance program fields. Intensive training programs are conducted by the Corporation to train fieldmen in selling techniques, in the contract provisions, and in loss adjustment functions.

Federal Extension Service

■ *Cooperative Extension—The "Educational Arm."* "What a man hears, he may doubt; what he sees, he may possibly doubt; but what he does himself, he cannot doubt."

Seaman A. Knapp, agricultural leader and teacher, discovered this basic idea early in the century, when the Secretary of Agriculture assigned him to help Texas farmers battle the Mexican boll weevil. He devised the self-help demonstration as a key technique in getting farmers to accept and use scientific research.

His method laid the foundation for the Cooperative Extension Service, now grown into the largest out-of-school educational system in the world.

Today, some 14,000 professional extension workers pursue interesting, rewarding careers based on this native American idea. About 11,000 of these jobs are located in counties throughout the Nation.

How Extension Operates

The Cooperative Extension Service is a partnership. Three levels of government—Federal, State, and local—share in financing, planning, and carrying out extension educational programs. Extension acts as the "educational arm" of the U.S. Department of Agriculture and the land-grant universities. Here is a vast facility for diffusing knowledge among people who can use it.

The Federal partner, the Federal Extension Service, employs a relatively small staff of technical specialists—usually experienced men and women who have formerly worked in the States—who assist State workers in an advisory and training capacity. They work with many agencies, both in and out of the Department of Agriculture.

The land-grant college or university, the State partner, has a staff of professionally trained specialists in agriculture, home economics, and youth work. Its State Extension Service, cooperating with county governments, employs the county farm, home, and 4–H agents.

These "professors in the field" help extend the campus boundaries and the resources of the Department of Agriculture to the far corners of every State. They relay information from laboratory and classroom directly to the people. And they also channel the problems of people to the scientists who can help solve them.

Who Benefits

Extension's "students" have traditionally been the people of rural America. Instead of meeting formally in classrooms, they have gathered in community halls, farm kitchens, even in open fields, to learn through lecture-demonstrations.

At first, county agents taught only farming and homemaking skills. Later, they began to emphasize the overall management and development of the farm and household.

Today, extension agents need to know how to help people develop community, regional, and industry-wide programs for total community resource development. They need to supplement their technical subject-matter knowledge with broader concepts of management, marketing, economics, and sociology to be able to assist

families and agri-business under changing conditions.

County and home agents need to know more about the economic and social problems of city dwellers, as well as farmers. There is no longer a dividing line between "city" interests and "farm" interests.

They use television, radio, and newspapers to reach larger audiences with information. In some States the agents conduct educational programs in public affairs to examine current questions.

Suburbanites today ask their county agricultural agent about lawns and landscaping. Home economics subjects have expanded to offer homemakers instruction on wise consumer buying, family relations, and health and safety. Communities turn to the extension agent for guidance on the problems of low-income families and the elderly citizen.

Most boys and girls living on farms today will have to find careers outside of farming. Training in 4–H work helps them prepare for that future.

A Rewarding Job

Because Extension work is based on local needs, no county agent's job is quite like another's—it is as individual, as varied, as the land or the city where he works. The challenges are exciting to the imaginative men and women who meet them daily.

With its half century of experience in helping people organize for group action, Extension is well suited to accelerate the nationwide process of economic development and social improvement. Seaman Knapp's philosophy of "helping people help themselves" still works.

The professional extension worker finds great personal satisfaction and gains an enviable status in his community in the process of helping.

Employment Opportunities

Approximately 1,000 to 1,500 County and State Agricultural Extension positions are filled each year. Recent college graduates are usually employed in a county as an assistant agent. Assistant agents may do general work or they may specialize in an area such as 4–H Club work, livestock, farm or home management, or rural areas development. Employees grow in status and salary as they perform their duties successfully. The county is the key unit of the Extension Service and many agents remain in county positions by choice. Career opportunities are available as District supervisors, subject-matter specialists or administrative type positions depending on an individual's interests and talents.

For further information about State and county positions, write to the Director, Cooperative Extension Service at the Land-Grant College or University of the State in which you desire to work.

At the Federal level, agricultural extension specialists provide leadership in the work of the Federal Extension Program through the fields of program leadership, educational research and training, subject-matter specialization, and educational media. They also assist State extension directors, supervisors, and program leaders in planning, developing, and coordinating national, regional, and State extension programs.

The fields just mentioned have positions at the GS–12 through 15 levels; professional experience is required to qualify for these jobs. In addition to the basic requirements, 3 years of professional experience is required for the GS–12 positions. However, graduate study may be substituted for up to 2 years of experience.

For additional information about the Federal Extension Service and the career opportunities it offers, contact:

Personnel Management Branch
Federal Extension Service
U.S. Department of Agriculture
Washington, D.C., 20250

Foreign Agricultural Service

■ The Foreign Agricultural Service (FAS) as a world-wide agency of the U.S. Department of Agriculture, is responsible for planning and representing America's agricultural programs abroad.

During the past few decades, the international aspects of U.S. agriculture have changed in nature and increased in scope and complexity. Developments in foreign agricultural production and trade vitally affect farmers, agricultural trade groups, and the economy of this country. To do its job, FAS must have accurate information about the agricultural economy and agricultural trade of all nations, so that USDA can play its part toward a peaceful world of plenty.

Nature of Activities

The functions of FAS cover several broad areas relating to U.S. foreign trade maintenance and expansion.

Maintaining and Expanding Agricultural Exports

Increasing exports to dollar markets is a primary job of FAS. In some cases, access to these foreign markets can be gained by removal or lowering of trade barriers. In other cases, other techniques will be needed. FAS provides information and data on foreign agricultural market and trade situations, developments, and trends which help to keep U.S. commodities competitive in the world market. In more than 50 countries, FAS cooperates with the many U.S. and foreign trade and agricultural organizations in market development projects.

Global Agricultural Intelligence

FAS operates the world's most comprehensive agricultural intelligence system. This reporting and analysis network provides a constant flow of facts on world agricultural production, trade and consumption of farm commodities, and related information which affects U.S. agriculture. This intelligence consists of on-the-spot reports from agricultural attaches and officers at various posts around the world, analysis of these field reports by commodity experts and economists in Washington, and distribution of this information to all who have an interest in foreign agricultural trade.

Food-for-Peace Program

FAS plays a major role in the U.S. Food-for-Peace Program. Not only does this program support U.S. foreign policy by helping friendly peoples in developing countries, but it also aids the economic growth of such countries. This, in turn, strengthens the demand for U.S. farm products. Sales for foreign currencies are an important aspect of special government programs under which Food-for-Peace is exported. In addition, short-term and long-term dollar credit is granted to facilitate export sales where the private exporters and importers are in need of working capital. This helps to assure importing countries of continuing supplies in periods of expanding economic development.

International Trade Policy and Agreements

FAS analyzes and appraises foreign trade policy affecting exports of U.S. agricultural commodities and works closely with other agencies in the establishment of U.S. foreign agricultural trade policy.

It has responsibility for proper U.S. agricultural representation in trade barrier negotiations with foreign countries.

Scope of Activities

With the world as its territory, FAS represents the U.S. Department of Agriculture at 61 overseas posts, covering over 100 foreign countries. This far-reaching and complex program is operated with about 900 employees, of whom 600 are in Washington and 300 are overseas.

Employment Opportunities

In carrying out its activities, FAS has need for graduate and undergraduate students who majored in agricultural economics and agricultural marketing. This need includes both undergraduate students hired for summer employment and junior professionals who are beginning their careers after the completion of their college work. These employees may work toward careers in international market development, economic analysis, overseas representation, and related activities. For the oversea posts a supporting staff of secretary-stenographers is needed. They are primarily selected from the Washington staff for assignments as vacancies arise.

Student Trainees

In the Student-Trainee Program undergraduates are sought who have completed at least 2 years of college and who plan to continue through a bachelor's degree with a major in agricultural economics. These students are selected from eligibles in the student-trainee examination administered by the Civil Service Commission. They receive career-conditional appointments and are employed during the summer months at the GS–3 or GS–4 level.

Junior Professional Development

Under this program young people are hired who will complete all requirements for a degree. These people are selected from eligibles in the Federal Service Entrance Examination and are appointed at grades GS–5 or GS–7, depending on the grade for which they are eligible on the Civil Service Register. Select graduate students with master's and doctor's degrees in agricultural economics and agricultural marketing are recruited. These students must have qualified in the economist examination or the marketing specialist examination. Recruitment from these examinations is generally at the GS–7 to GS–11 levels.

Secretaries and Stenographers

In order to qualify for the position of secretary or stengorapher, GS–4, the applicant must have Civil Service status and 1 year of experience in the secretarial field or eligibility in a clerk-stenographer examination.

Advancement and Training

Opportunities for advancement and training are exceptionally good. The service is able to provide for individual supervision of employees, for thoughtful orientation to job requirements, and for careful follow up and evaluation of job performance. FAS strives to help employees achieve their highest potential and to develop them for assignments of greater responsibility. As young professionals, new employees are placed in trainee positions in the Washington office and given the opportunity to develop along the lines of their greatest capability. The Junior Professional Development Program provides for the broad economic orientation of the agency, its problems, objectives, organization, programs, public relations and intergovernmental relationships. Under the guidance of senior staff members, junior professionals receive intensive training in economic analysis work in a variety of program areas.

Undergraduate students will be interested in the Student Trainee Program which offers them an unusual opportunity to participate in an intern program in their field of work. FAS provides student trainees with the same broad orientation as that given to members of the Junior Professional Development Program.

Overseas a secretary may serve as principal secretary to the agricultural attache; therefore, it is important that secretaries become familiar with program objectives of the Service and with Federal Government procedures. This is achieved through orientation and on-the-job training in Washington, D.C., prior to assignment to a duty post abroad.

It is hoped that you now have an idea of the opportunities for service in world agriculture and that you may want to learn more about an interesting and challenging career in the Foreign Agricultural Service. If you desire more information on FAS and how to become a part of it, write to:

Director, Personnel Division
Foreign Agricultural Service
U.S. Department of Agriculture
Washington, D.C., 20250

Forest Service

■ At the turn of the century a young man from Pennsylvania was dedicated to the idea that America's natural resources belonged to all the people, and that they could not be expected to produce their many benefits continuously unless they were taken care of. This man was Gifford Pinchot, and he had among his allies President Theodore Roosevelt. As a result of the efforts of such men, the Forest Service was established in 1905.

Nature of Activities

Today, the Department of Agriculture's Forest Service is responsible for the development and management of 186 million acres of National Forests and National Grasslands, located in 39 States and Puerto Rico. The Forest Service improves them; protects them from fire, insects, and disease; and manages their multiple resources for orderly and continuous service.

Two basic policies apply in the management of the National Forests and National Grasslands: multiple use and sustained yield. Multiple use means the utilization of the forest resources to meet best the long range needs of the American people. In accomplishing this, the National Forests must be made to yield continuous supplies of water, timber, forage, and wildlife, as well as to provide recreation opportunities for the millions of people who visit them.

Managing these lands by the multiple use—sustained yield policy is only one of the Forest Service's four major responsibilities. To provide the basic facts needed to carry on their programs and to develop new methods to facilitate them, the Forest Service carries on extensive forest and range resource research in many fields. Cooperative activities with the States and private forest landowners are also carried on to exchange knowledge and provide support in the protection and management of forest lands. Only recently has the emerging field of international forestry made it possible to carry on this cooperation on a global basis.

Career Opportunities

In 1905, 734 employees administered 54 million acres on 60 forest reserves, as they were then called. Today some 19,000 full-time employees are aided by approximately 22,000 part-time and seasonal employees in carrying out the organization's public services. To manage and administer such a widespread and diverse operation requires an equally wide distribution of different kinds of jobs. The Forest Service hires employees in more than 150 distinct classes of positions, from range conservationist to computer programmer.

Some 5,000 foresters help to carry out the Service's primary responsibilities. About two-thirds of them work on the National Forests, which include some 805 Ranger Districts. Other foresters work on administrative or research duties at regional offices, laboratories, and other facilities of the more than 90 installations across the country.

Backing up the forester are more than 14,000 scientific, professional, administrative, technical, and clerical personnel. Bacteriologists, botanists, research foresters, geneticists, and men and

women representing many other scientific disciplines conduct research into the diverse problems involved in forest management, genetics, diseases, and insect control. One thousand professional engineers (mechanical, highway, and civil) plan, design, and supervise projects that contribute heavily to the fuller use and enjoyment of the Nation's forests. Landscape architects design and develop large recreation areas. Business administration personnel play a vital role in regional and national financial and manpower planning, policymaking, and the handling of fiscal operations.

These are a few of the positions within the Forest Service. Each one is designed to operate toward the primary goal of providing the best of national and international leadership in the conservation and utilization of forest resources.

Career direction and comprehensive training programs help the employees in accomplishing these goals. These programs are tailored to the individual's needs and are available to most employees. They are designed not only to help employees in the performance of present duties but also to prepare them for more difficult and responsible jobs. Applicants selected generally enter at grade GS–5 or GS–7 depending on their qualifications and experience. After 6 months or a year of satisfactory work, employees are eligible for promotion consideration. A promotion after from 6 months to one year of service in grade GS–5 is possible where approved individual training programs have been developed. After the initial training period, assignments are usually made to operating positions. Promotion to the higher levels are made on the basis of ability and potential. Most job specializations provide career ladders through grade GS–15.

The future looks good in the Forest Service. Plans call for rapidly increased activity on many fronts, including needs for research and recreational facilities. And this means satisfying personnel development with challenges and advancement.

Since this work is carried on in many States and Puerto Rico, the local environments in which the people work are diverse and stimulating. Working relations, both inside and outside the Service, are as diverse as the environments and equally interesting, since they represent dealings with people from all walks of life. In large part, the pleasure and the satisfaction in working for the Forest Service stem from a pride in the agency's spirit of public service, its record of past accomplishment, and a strong belief in its future goals. All of these are intangible, but they are invaluable assets to any job. In employing new people, the Forest Service seeks to obtain men and women who are not only properly trained for the work, but who also have high ideals and a desire to serve the public.

National Agricultural Library

■ What has a library to do with farming, ranching, business, industry, conservation, and scientific research? If it is the National Agricultural Library, the answer is "a great deal." Being part of the Department of Agriculture, the Library serves the needs of employees whose research projects are as extensive as the term agriculture is broad. And the agricultural librarian supports and services all of these varied functions of the agricultural network by bringing together the recorded knowledge in the specific field and the people to whom it is essential.

Nature of Activities

From an initial collection of 1,000 volumes transferred from the Patent Office in 1862, the collection has now grown to 1,212,000 volumes. Next to the Library of Congress, the National Agricultural Library is the largest Government library. Acquisitions in agriculture and the related sciences come by purchase, gift, and exchange. The exchange program is especially active, accounting for three-fourths of the collection. It is not uncommon to receive in a day publications in more than 50 different languages from over 200 countries. All of these acquisitions are responsible for the miles of bookstacks that hold the largest collection of agricultural publications in the world.

The scope of the collection is determined by the needs of the Department. Most of the holdings are highly technical and scientific. They include all phases of agriculture and related sciences—botany, chemistry, animal industry, veterinary medicine, biology, agricultural engineering, rural sociology, forestry, entomology, law, food and nutrition, soils and fertilizers, and also the marketing, transportation, and other economic aspects of agricultural products.

The Library disseminates information through its "Bibliography of Agriculture" and other special bibliographies and through loans, photocopies, and reference services to agricultural colleges and universities, research institutions, Government agencies, agricultural associations, industry, and the general public.

The Library is well known for continued progress in scientific management. Notable is the extensive use of photocopying, illustrated by the invention of equipment which allows photocopying in a continuous strip. This practice has resulted in reduced costs in supplying researchers with information. Noteworthy, too, is former Director Ralph Shaw's "Photoclerk," a photographic device for replacing manual typing operations. The Library is constantly improving its techniques and management to render the resources of the collection more readily available to Department workers.

The National Agricultural Library operated in a national capacity long before the term became a part of its name. The Library's policies, procedures, and programs all center around its national character. This is exemplified by printing and distributing catalog cards upon request to agency field and branch libraries; the extensive development of special and general bibliographies; pioneering activities in the use of photocopy for interlibrary loans; the responsibility for the

foreign exchange of Department publications; and assistance in the development of agricultural libraries.

As research projects change and policies of the Department change, so the Library modifies its methods of operation. For the National Agricultural Library cannot afford merely to keep books; these publications must circulate to continue the flow of knowledge from one creative mind to another. And researchers cannot afford to make costly, time-consuming duplications of experiments. Here the Library offers its resources to supply a firm foundation of background material and previously tested hypotheses on which to build new achievements. For although facts are in the past, progress is based on past knowledge.

Living in the Nation's Capital

Newcomers to Washington may sightsee in the many famous art galleries, museums, and points of national interest. More established residents find other enlightening and entertaining activities, many of them easy on the budget.

Theater enthusiasts enjoy productions of the Arena Stage, the National Theater, and drama groups of the local universities. In the summer open-air drama and comedy at the Sylvan Theater, the Carter Barron Amphitheater, and the Watergate offer evenings of distinctive entertainment. As host to delegates from all over the world, Washington has inherited gourmet tastes for exotic dishes served in the most varied and stimulating atmospheres.

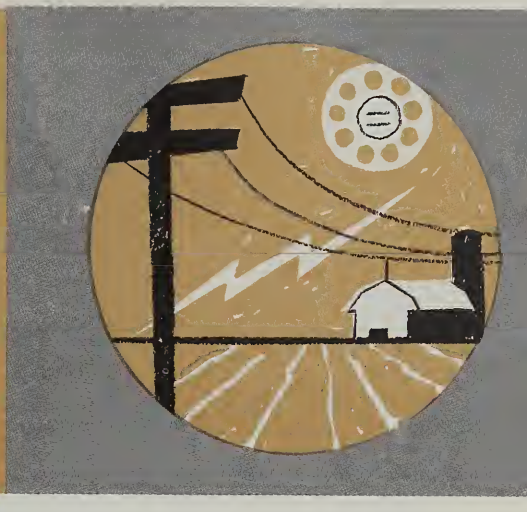
And bookdealers—whether behind quaint Georgetown facades or sophisticated exteriors—offer subjects as varying as the interests in the Nation's Capital.

Career Opportunities

Although the number of opportunities varies, the majority of agricultural librarian positions—acquisitions, bibliography, cataloging, lending, reference, law, and administrative—are at the main library in Washington, D.C., positions are also available in Beltsville, Md., where the Beltsville and Bee Culture Branches house their collections. Some positions exist at the agency field libraries throughout the United States.

Under the Career Service Program of the Library well-qualified librarians have excellent opportunities for advancement to higher grades.

Rural Electrification Administration



■ In 1935 when the Rural Electrification Administration (REA) was created, only 10 percent of the Nation's farms had central station electric service. Today, 97.6 percent of American farms are electrified. However, REA's task is still formidable: 100,000 new consumers are being connected each year, rural distribution systems continue to require increasing supplies of wholesale power, and system capacity is constantly being increased.

Nature of Activities

REA does not make grants or gifts of money. It makes loans. It has approved $5.0 billion in loans to 1,098 electric borrowers and these loans are being repaid with interest under provisions of the Rural Electrification Act. REA electric borrowers have paid the Federal Government more than $1.7 billion in principal and interest. Only two borrowers are presently overdue on their payments.

REA had been established by an Executive order in 1935 as a relief agency. However, the first Administrator, after studying the problems involved, concluded that an effective rural electrification program could not be carried out as an unemployment relief program. The rural electrification program had to be established as an orderly lending program on an interest-bearing, self-liquidating basis.

The passage of the Rural Electrification Administration Act of 1936, authorizing loans to nonprofit associations, paved the way for the organization of rural electric cooperatives.

Today, 9 out of every 10 organizations financed by REA electric loans are cooperatives. They are local, independent, tax-paying private enterprises, organized under State laws by rural people seeking electric service. REA's history of close association with rural cooperatives is a landmark in rural areas development. Through this program, the work of millions of rural people has been made infinitely easier.

These borrowers operate 1.5 million miles of electric lines in 46 States, the Virgin Islands, and Puerto Rico. REA electric borrowers use the "area coverage" policy in their efforts to furnish electricity to rural areas. The lines they build with REA financing are designed to serve entire areas, including less densely settled sections as well as more populous ones. When REA examines a loan application, it considers the feasibility of the proposed system as a whole, not each individual line or section. This policy tends to limit the possibility of unserved "pockets" of consumers in isolated areas.

Through long-term loans and technical assistance, REA has helped to abolish much of the drudgery that was associated with farming. The application of electric power to farm production has done much to hasten the agricultural revolution in America.

In addition, the success of the REA program prompted Congress to amend the Rural Electrification Act in 1949 to provide for the extension and improvement of telephone service on the same basis.

REA has approved a total of $990.2 million in telephone loans to 600 commercial companies and

218 cooperatives to finance telephone facilities: this includes 469,000 miles of line to serve 1.8 million rural subscribers. The borrowers have made a total of $120.6 million in payments of principal and interest to the Federal Government in this more recent lending program.

Most of REA's 1,000 employees are located in Washington, D.C. Since REA has no branch or field offices, about 250 employees (engineers, management representatives, and accountants) operate from their homes in various locations scattered across the country; consequently, their homes serve as official headquarters. These employees receive, in addition to salary, "per diem" payments for expenses while on official duty away from their headquarters. There is also a travel allowance to cover the expenses of employees driving their own cars on official business.

Opportunities, Training, Advancement

Engineering, management, and accounting services are important parts of the assistance REA renders to its borrowers. For positions in these fields, appointments are made at grade GS–5 or GS–7, depending upon the applicant's qualifications as rated by the appropriate U.S. Civil Service Commission Office. Trainees appointed at GS–5 are automatically promoted to GS–7 after successfully completing a 6-month training program. Training is in the form of lecture-discussion periods supplemented by related on-the-job work. This acquaints the employee with REA procedures, requirements, and practices. REA's training activities are conducted by experienced staff members and specialists in the various fields of telephone and electric utility engineering, operations, and management. Graduate study is available at several universities in the Washington area and at the U.S. Department of Agriculture Graduate School. All of these offer evening classes. Opportunities for advancement to higher grades are very good for those who demonstrate ability.

REA follows a promotion-from-within policy insofar as it is consistent with good management practices. Vacancies are announced in a way which assures each employee an opportunity to apply and to be considered by those responsible for making selections. The major objective in recruiting trainees is to select persons with the greatest potential for progressive advancement to more responsible positions.

Soil Conservation Service

■ Employees of the Soil Conservation Service (SCS) work with people—all kinds of people—in the national program of soil and water conservation. Except for a staff of 300 in the Washington, D.C., office, the Service's 15,000 employees are located throughout the 50 States, Puerto Rico, and the Virgin Islands. Here at the "grass roots" level, where the bulk of the conservation job is being done, the Service works with land owners and operators, local organizations and communities, and other agencies.

Scope of Activities

Modern conservation is based on using land wisely and treating it with whatever measures are needed to keep it permanently productive.

For this purpose the Service has drawn together a staff skilled in a wide range of technologies. Here are found engineers, agronomists, biologists, range conservationists, soil scientists, geologists, hydrologists, economists, administrative people, and many others.

Nature of Activities

One of the Service's primary responsibilities is to give technical help to soil conservation districts that are organized and run by the landowners themselves under State law. SCS has taken on wider tasks as the need for wiser use of resources has grown. Some of these responsibilities include:

Small Watershed Protection Program

Under this program the Service aids local organizations in the planning and developing of small watershed projects that protect the watershed itself; reduce floods; and provide water for irrigation, livestock, wildlife, recreation, and municipal uses. The program has effectively bridged the gap between the conservation work done on individual farms and that done on the larger river basins.

The Great Plains Conservation Program

This accelerated program administered by SCS in the Great Plains is bringing about greater agricultural stability in that region. The program aims at initiating needed land-use adjustments and the application of enduring conservation practices in the 10 Great Plains States.

Soil Survey

SCS has the leadership responsibility for the National Cooperative Soil Survey. Soil scientists have surveyed more than 700 million acres in this country. The findings of this inventory of our soils are not limited to agricultural uses. Today, soils information is also used extensively by engineers, urban planners, land appraisers, and others in sound planning for the future use of our land and water resources.

Snow Surveys and Water Forecasting

The Service's snow survey and water forecasting work is extremely important to agriculture, industry, and cities in the Western States. Service personnel cover about 70,000 miles each winter by skis, oversnow vehicles, and aircraft in measuring the snowpack of some 1,300 snow-survey courses. The data they collect are translated into a water-supply forecast. Water users in

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the West base their plans for the year's operations on this forecast because most of their water supply comes from the snow that falls in the mountains.

Nonfarm Conservation

The need for developing and improving our soil and water resources has never been greater than today. Vast amounts of land are being taken out of agricultural use each year by our expanding population. New housing developments, industries, and superhighways now stand on land that once grew a portion of this Nation's food and fiber. Proper use and planning are essential in these areas. The Service provides technical information to city and county governments, highway planners, zoning bodies, and others.

Resource Conservation and Development

The Soil Conservation Service has responsibility for directing the Department's Resource Conservation and Development Program. The program enables farmers, city people, rural communities, civic groups, and others to work together on their mutual land-use and resource problems and opportunities through Resource Conservation and Development projects.

Assistance in Other USDA Programs

The Service provides technical help to farmers and ranchers who are applying permanent conservation measures with cost-sharing aid from the Agricultural Stabilization and Conservation Service and to those taking part in the credit program of the Farmers Home Administration. In addition, it certifies the adequacy of the practices installed.

The Service also assists owners of private land in establishing income-producing recreation enterprises on their land.

Employment Opportunities

Most positions in SCS are located in small towns and cities. A great deal of outdoor work is required in most of the professional jobs. New professional employees usually enter the Service at grades GS–5 and GS–7. Higher-grade positions normally are filled by promoting someone already in the Service, through the SCS Career Development and Promotion Plan. This plan extends to all employees the opportunity to develop so they can accept greater responsibilities as opportunities arise.

Various training programs are available to help employees increase their proficiency in specialized fields or to equip them for administrative positions. Both on-the-job and group training provide intensive and specialized instruction. The instructors are experienced technical men.

For additional information about the Soil Conservation Service and the career opportunities it offers, contact: Director, Personnel Division, Soil Conservation Service, United States Department of Agriculture, Washington, D.C., 20250.

Statistical Reporting Service

■ The U.S. Government gathered agricultural statistics nearly a quarter of a century before the Department of Agriculture was created. In 1839, the Commissioner of Patents received $1,000 from Congress to gather agricultural statistics, collect and distribute seeds, and conduct agricultural investigations.

Long Tradition of Fact Gathering

When the U.S. Department of Agriculture was created in 1862, one of its assignments was to gather statistics useful to agriculture, and a Division of Statistics was established the following year. The name of the fact-gathering agency has changed many times, and the responsibilities have multiplied manyfold, but the Department has engaged in statistical analysis since its beginning. All the statistical activities of the Department were brought together under one agency in 1961, when the Statistical Reporting Service (SRS) was established. Nationwide in scope, with headquarters in Washington, it has 45 offices gathering information in all 50 States.

This makes SRS the Nations's chief collector of agricultural statistics. Its primary job is the preparation of forecasts, estimates, and reports of production, supply, price, and other aspects of the agricultural economy.

To accomplish this job, SRS has, over a period of 100 years, developed into a complex, nationwide organization. It provides a great deal of career flexibility because it has a large number of professional positions; provides opportunity for work involving a variety of crops, livestock, and prices; covers all the United States; and is increasing emphasis on mathematical-statistical techniques and electronic data processing.

How Information Is Gathered

SRS issues from Washington about 600 crop, livestock, and price reports a year. The 45 field offices issue similar reports for the 50 States. Most of the information comes from questionnaires returned by some 800,000 farmers and businessmen who are volunteer reporters. USDA statisticians gather supplementary information by enumerating farms in scientifically selected sample areas, and by making careful observations and measurements of test plots during the growing seasons. When crop reports are released the information has gone full circle—from voluntary crop reporters who supplied the data, back to them and their neighbors to help them in their decision making.

The reports include statistics on acreage, yield, and production of field crops, fruits and vegetables, numbers of various types of livestock and poultry, production of animal products, and grain and cold storage stocks. Also included are prices received by farmers for commodities and services they buy; indexes of prices received and paid; and data on parity prices, farm employment, and wage rates.

Users of Agricultural Statistics

There are many users of crop, livestock, and price reports issued by SRS. Farmers themselves use statistical information to help them decide what to produce, and when and where to sell it. The reports also are used by business firms which

process and distribute farm products, and by firms which supply farmers with fertilizer, machinery, and other production needs. The press, one of the big users of farm facts, helps consumers make use of agricultural statistics as guides to buying. Another large user is the Government—Federal and State. Acreage allotments, price supports, and conservation programs are based on statistical information.

Safeguarding Farm Facts

When reports on speculative crops are being prepared, SRS takes special security measures. Such precautions are taken to prevent premature disclosure of information which might give an advantage in trading in such commodities as corn, wheat, and cotton. The reports, prepared behind locked and guarded doors, are released at a previously announced time, so that all may have equal access to the information. Seconds after the release time, information from the reports is transmitted by telephone and wire to newspapers, magazines, wire services, radio and television stations across the nation.

Employment Opportunities

The technical staff of SRS is composed of agricultural statisticians and supervisory agricultural statisticians as well as mathematical statisticians. Agricultural statisticians work as commodity specialists in 45 field offices covering the 50 States and in Washington, D.C. Mathematical statisticians are presently employed only in Washington.

SECTION III

PROFILES OF CAREERS

Section III

PART 1

CAREERS IN ADMINISTRATION

Administration

■ The Department of Agriculture, representing the public interest in agricultural matters, has played a decisive role in the success of American agriculture. This success has been shared by the farmer-producer, by industry, and most importantly by all Americans as consumers. In response to the needs and demands of these three groups, the Department has grown both in size and scope to become a multibillion dollar a year organization.

With an operation of this size, it is imperative that the Department attain maximum effectiveness in carrying out its objectives. This means that the programs of the Department must be administered in the most efficient manner possible. Sound management in planning, administration, and operations is mandatory.

The Department of Agriculture has made great strides in the field of administration. Top officials have established the principle that good management is a "way of life" in the Department. One of the more recent programs of systematic management-improvement is MODE (Management of Objectives with Dollars through Employees).

This system of management will not only pay Department of Agriculture employees, keep their personnel records, and watch the Department's budget, but more importantly, it will help to coordinate the expenditure of monetary and personnel resources to carry out more effectively the program objectives established by the Secretary of Agriculture. The MODE system will not provide the answers management seeks, but will provide additional and more sophisticated tools which management can use to determine how well objectives are being accomplished.

Another step in the improvement of the administration of the Department was taken by the Secretary when he directed all agencies to carry out the policy of housing together, in consolidated offices, those field activities serving the same geographical area. This policy is designed to "insure maximum service and convenience to the public . . . and promote efficiencies and economics in the handling of administrative functions common to all agencies."

As a result of a Department-wide conference on personnel policy, the Department of Agriculture has taken the lead within the Federal Government in two major personnel areas. These areas are (1) the utilization of new techniques, particularly automatic data processing, in personnel management, and (2) the development of a program of working relationships with employee organizations.

The use of data processing is an integral part of the MODE system.

The Department of Agriculture was the first agency of the Federal Government to grant exclusive recognition to an employee union. The Secretary in a statement of policy has declared that it is the intention of the Department to "cooperate with the representatives of employee organizations with the goal in mind of making the Department a model employer and providing the conditions under which each employee will strive to be a conscientious and efficient public servant."

Careers in Administration

The management innovations and improvements just described provide a clue to the type of administration being developed in the Department of Agriculture. College graduates who are seeking a career in administration will find challenging and worthwhile career opportunities in any one of the several fields of Departmental administration.

Budget and Finance

Government budgeting is the staff function through which financial requirements of program objectives and resources are related to achieve, through the most effective and economical use of funds, the greatest efficiency of operations. It is a specialty that is both varied and challenging and one that requires persons having a broad general background and high qualifications.

The close relationship of budgeting to program planning and management demands familiarity with agency operations and principles of good management. Developing and evaluating budget estimates requires highly trained analytical ability and a faculty for relating detailed factors to broad considerations of public policy. Communicating the estimated needs of executive agencies for consolidation into an overall Federal budget and presentation to Committees of Congress requires the ability to express facts and ideas clearly in speaking and writing.

After needed funds have been obtained from Congress, their proper expenditure must be controlled and accounted for; this requires a knowledge of applicable laws and sensitivity to the intent of Congress. Some familiarity with related fields of fiscal management, legislative reporting, and accounting is also helpful in professional budget positions.

For convenience, budget work is separated into three categories: Budget formulation, budget execution, and budget procedures and improvements. However, many budget jobs frequently include responsibilities in all three categories. Budget positions at various levels ordinarily differ more in the amount of supervision required or given to others than they do in the type of work done.

Accounting

The variety and extent of program activities in the Department, ranging from research through the handling of large amounts of agricultural commodities, offer outstanding opportunities for interesting and rewarding careers in almost every field of accounting.

The complexities involved in recording and reporting the fiscal aspects of various programs require the services of qualified personnel in developing, maintaining, and appraising the effectiveness of accounting systems. Because the systems are frequently unique to each agency's individual needs, accounting positions do not fall in the limited area defined as governmental accounting, but include positions in cost accounting, corporation accounting, property accounting, and other specialities.

Accountants at the agency and departmental levels examine and evaluate accounting systems to determine their adequacy and effectiveness. They recommend modifications and revisions, and provide technical guidance in making changes.

Departmental staff accountants work with representatives of the General Accounting Office in furthering the Government-wide accounting improvement program.

Most of the accountants of the Department work on operation and maintenance of accounting systems, The volume of transactions in large-scale lending and commodity-handling operations require a well-organized approach and the services

of numerous accountants to classify and record necessary information and provide reports and analysis of tabulated data.

Professional accountants are responsible for control of the accounting organization, for analysis and interpretation of summary information for the use of top management, and for adapting the existing system to meet emerging developments.

Some accountants specialize in accounting work associated with business or corporate type activities of the Department, The specialized accountant is responsible for the operation of unique accounting systems, for the control of the financial aspects of particular activities, and for the presentation and interpretation of data as an aid to management in controlling current and future specialized operations.

Personnel Management

To those interested in the selection, development, and use of human resources, personnel management offers a challenging opportunity. Employee development and improved employee performance are goals that the Department of Agriculture is striving toward. Through the recruitment and development of quality personnel, the methods and techniques of program operations will be constantly improved.

Therefore, the primary objective of the personnel officer is to provide an effective program for manpower management. This may involve the broad planning aspects of manpower review, analysis, and development, or it may involve such specific activities as recruitment and placement, job classification, training, and employee relations. In either case, the personnel officer should provide the most efficient and effective work force possible. In this way, he relates "men" to the "money and material" phases of management.

Management Analysis

Management analysis is a field in which a person with high analytical ability can find a challenging career. Management analysts evaluate the management systems of the Department and develop new or improved procedures, systems, and organizational structures.

The application of broad and general management principles to a variety of organizations, subject-matter areas, and functional activities is required in most management analyst positions. For this reason, applicants should have a broad education.

Among the varied functions assigned to management analysts, some call for specialized knowledge, while others are of a more general character. Typical duties include the development, evaluation, and improvement of management processes and organization. These involve organizational structure, work methods and procedures, work measurement, work simplification, management surveys, directives systems, and manpower utilization. The analyst applies a practical and theoretical knowledge of a variety of managerial principles, functions, practices, and techniques to the Department's management problems. Therefore, a primary essential of the management analyst is an ability to undertake the solution of a wide variety of problems.

Management analysts must be able to focus on the broad managerial matrix, instead of getting lost in the minutiae of details which are inevitably involved in most assignments. This ability grows out of their capacity to utilize their education and experience in a meaningful and creative manner to solve a variety of operational and managerial problems.

Employment Opportunities

The administrative positions just described are common to all agencies of the Department, in addition to the staff offices of the Secretary. Successful completion of the Federal Service Entrance Examination (FSEE) qualifies the college graduate for all of these positions.

The Management Intern Option of the Federal Service Entrance Examination offers additional opportunities for those interested in an administrative career. Not only does the management intern enter the Federal service at a higher grade than other qualified applicants, but in addition, he receives more intensive training and a wider range of assignments during his first year on the job.

The Department employs people in administrative positions ranging from grades GS–5 through GS–17. Most entrance positions are at the GS–7 and GS–9 levels.

Advancement and Training

Most administrative people receive a promotion at the end of either 6 months or 1 year of service, and many receive another promotion at the end of the second year.

During the first 6 to 12 months, the new employee is aided and encouraged to get a broad grasp of the programs, administration, and management practices of the Department through discussions, seminars, and actual work assignments.

After the preliminary training period, employees are assigned to actual operating positions, but emphasis on training and development continues.

Throughout the first year, the Department attempts to expose its new administrative people to a meaningful blend of formalized training combined with challenging and worthwhile work assignments.

Qualifications

Graduates in public or business administration, government, political science, economics, law, or related social science fields find their academic background suitable to the initial requirements of most administrative positions.

The field of management in the Department of Agriculture is extremely broad and is open to both the specialist and the generalist. Therefore, those who have a general liberal arts background, as well as those with a public or business administration background, will find ample opportunities for employment.

How to Qualify and Apply

To qualify for an administrative position with the Department of Agriculture, you should first take the Federal Service Entrance Examination.

When you become eligible, submit an application form 57 to the personnel division of the agency in which you are interested or to the—

Office of Personnel
U.S. Department of Agriculture
Washington, D.C., 20250

U.S. Department of Agriculture

Agricultural Writer-Editor

GS–5 and GS–7

■ Just as marketing is the nerve center of the food and agriculture portion of our economy—the Marketing Information Division is the nerve center of USDA's Agricultural Marketing Service (AMS).

Duties

The job of the writer-editor in this Division is to get information from and about this fast-moving service out to the farmer, the marketing industry, and the consumer.

The Agency, AMS, (1) provides facilitative services, such as grading, inspection, and market news; (2) performs regulatory functions that help to safeguard the interests of the farmer and the consumer; (3) conducts research that finds better ways to get farm products to market—in better condition and at less cost; and (4) provides a number of food distribution services, including direct distribution of foods to the needy, and also food stamp, school lunch, special milk, and plentiful foods programs.

None of these programs can function effectively without a constant flow of information to the public. The writer-editor helps to prepare and keep this flow of information moving.

A writer-editor may be assigned to work primarily on information about any one or more of these programs, and he helps gain public understanding of these programs through all available media. He writes press releases and feature articles for newspapers, magazines, and trade papers for dissemination throughout a region or the Nation. He may prepare radio or television scripts or help plan motion pictures—and perhaps take part in some broadcasting or telecasting. He may write and edit leaflets and other publications. He may also work with visual materials, planning and selecting photographs and artwork to accompany printed matter, suggesting and organizing visuals for television presentations or for use at meetings or public exhibitions. He may work, too, on displays and exhibits destined for national and international conventions, fairs, and meetings.

In preparing these varied materials the writer-editor works closely with the program experts in AMS, learning how the various programs work, their purpose and scope, their importance to the Nation.

Qualifications

Imagination, originality, and sound judgment are essential ingredients for this job, as well as the ability to write and express ideas effectively. As the beginning writer-editor gains experience and acquires additional skills through job-related training, he will find excellent opportunities for career advancement.

Writer-editors may be assigned to work in the Washington, D.C., headquarters or in one of the five area offices of the AMS Marketing Information Division. These offices are located in Atlanta, Ga.; New York, N.Y.; Chicago, Ill.; Dallas, Tex.; and San Francisco, Calif. Regardless of where they work, writer-editors may be sent out on special assignment from time to time (1) to work with Extension Service personnel or with newspaper and radio outlets, (2) to provide information assistance at special hearings on market-

ing matters, (3) to help man exhibits, or (4) to carry out some emergency assignment.

Advancement

Writer-editors begin at either GS–5 or GS–7, depending upon their academic achievements and amount of experience, if any. All candidates starting at GS–5 will be placed in accelerated training programs which will make them eligible for promotion at the end of 6 months if their work is satisfactory. Promotion to higher grades can be expected by those employees exhibiting initiative, ability, and willingness to take on additional responsibility.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a degree or substantial course work in journalism, plus a background in the agricultural or biological sciences. Applicants must pass the Federal Service Entrance Examination.

Employment Procedures

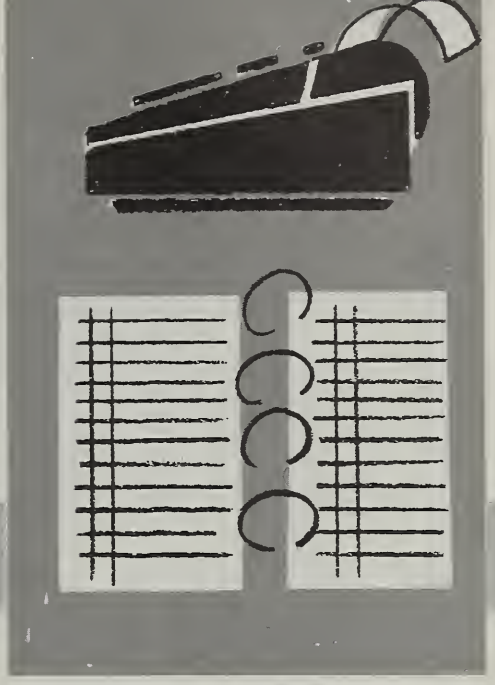
For further information, you may write to any one of the following offices nearest your home:

Personnel Division, Employment Section
Agricultural Marketing Service
U.S. Department of Agriculture
Washington, D.C., 20250

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

Auditor and Investigator



■ The Inspector General is responsible for the audit and investigative activities in all operations of the Department of Agriculture. The fulfillment of these responsibilities demands the wide-ranging talents of an imaginative and searching professional staff who have the capabilities of applying the techniques of their specialties to any one of thousands of challenging situations that arise in the day-to-day conduct of the complex and often critical affairs of the Department of Agriculture.

An auditor or investigator with the Office of the Inspector General (OIG) may be a member of a team examining the administration of this country's international agricultural program. He may participate in an evaluation of the Government's role in natural resources management; farm production; crop insurance; soil and water conservation, and a host of allied activities. He may conduct an investigation of alleged irregularities in any one of a hundred programs vitally affecting the economy of the United States.

Auditors

Internal audit in the Department of Agriculture is the independent appraisal of the operations of the Department as a protective and constructive service to management. The purpose of this work is threefold: to provide an objective and independent appraisal of *all* phases of operations and management controls to the Secretary, agency administrators, and all other levels of management; to inform management whether program objectives are being met and whether assets and contractual interests are conserved and protected; and to assist management in achieving efficient and economical program objectives.

The auditor's responsibility is to review, examine, and evaluate the Department's operational policies, systems, and procedures and report his findings and recommendations for corrective action to management.

Auditing includes the examination of program documents for conformity to departmental regulations and sound business practices; the determination of the existence and application of proper administrative controls; and the appraisal of existing program and administrative policies for adequacy and effectiveness. The auditor must be able to locate, verify, and analyze detailed data and information for the preparation of accurate audit reports.

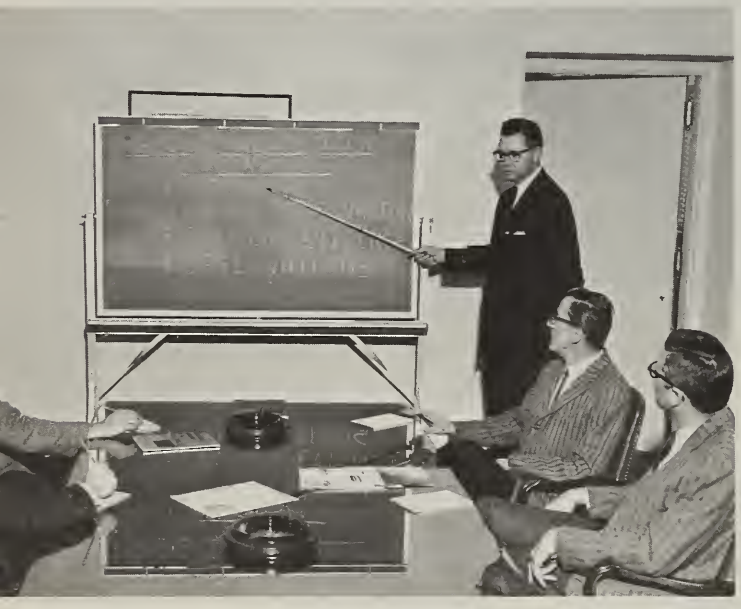
Investigators

Investigative assignments in OIG are based on complaints, allegations, or other evidence of violations or irregularities in departmental operations. The investigator reviews and analyzes applicable laws, regulations, or contracts to determine whether there is in fact a violation or irregularity and to determine the nature and extent of the violation. In many instances the investigation will pertain to subject matters beyond the scope of general knowledge and requires extensive research and study.

The investigator must determine the method of conducting the investigation and the sources of potential information to be obtained, and then plan his itinerary and course of action accordingly

with a view to expediency and economy. An accurate appraisal of the potential problems and uncertainties and the use of sound judgment in the initial steps of an investigation are highly important to a successful conclusion.

Upon initiation of any investigation each successive step must be carefully planned and followed through according to the discretion and judgment of the investigator. Every investigation has its own peculiar problems and no two investigations of the same type and character can be handled in the same manner, because of the circumstances, personalities, and physical factors involved. This calls for not only good investigative techniques but also a good concept of trade practices, customs, and procedures peculiar to the particular trade or industry to which the investigation relates.



Upon conclusion of an investigation, the investigator must correlate and assemble all data into a report for presentation to administrative officials for appropriate administrative, civil, or criminal action. Report preparation demands exacting care in the proper marshalling of facts and introduction of supporting evidence so as to reflect clearly and concisely all phases of the investigation. These reports in many instances are subject to use by the Office of the General Counsel, the Department of Justice, and U.S. Attorneys, and the content matter must be fully adequate and susceptible to ready use by these offices.

Job Opportunities

The Office of the Inspector General is organized on the lines of a headquarters staff located in Washington and regional operating staffs at seven major cities located in the heart of concentrated agricultural activities in each of the major geographical divisions of the United States. Working out of any one of the seven regional offices, employment with the Inspector General carries you either individually or as a member of a professional team of auditors or investigators, into every city, town, and village, where Departmental activities have an active interest. You work and travel with professional colleagues having training and interests allied with your own.

Appointment is at the GS–5 or GS–7 level, depending upon qualifications. OIG's professional career development and training programs provide a firm ladder for development, growth, and promotion up to and including grade GS–15. In addition, a nationwide organization makes it possible to move into and out of, or relocate permanently in the section of the United States of interest to you.

Qualifications

If your education or experience is in the field of law, accounting, auditing, economics, business administration, management engineering or agricultural administration—these and many other similarly challenging jobs can be yours as a professional member of OIG.

How to Apply

If you are interested in the work of the Office of the Inspector General and want to become a part of it write:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Business Administration

■ Development and protection of the American forests is vital to the sustained economic progress and strength of the United States. Sound management in planning, administration, and operations is mandatory. The skills and techniques of business administration specialists are needed in this management at all levels of Forest Service operations.

Today, the Forest Service employs 19,000 men and women in permanent full-time positions and 22,000 more in seasonal activities. They are engaged in the management and development of the 186 million acres that make up the National Forest and National Grasslands System; they develop extensive cooperative work with States and private forest landowners; and they carry on broad programs in research and international forestry.

Kinds of Jobs

An activity of such depth and scope requires the services of many professions, including those of business administration. The business administration graduate will find career opportunities in several different fields in the Forest Service.

Accountants are an integral part of the management team. They find rewarding careers directing the establishment, appraisal, and modification of the accounting system and the operation of all accounting functions. Among these functions are general and financial accounting, coordination with budget development and control, cost accounting, capital investment accounting, auditing, and systems and procedures development. Accountants become acquainted with overall programs and objectives and apply their accounting backgrounds in support of management. Competence in accounting and sound training provide valuable background for advancement to top management jobs.

Budget officers usually begin their careers at field locations. Here they learn basic principles of work planning and work measurement which they relate to dollar values and budget preparation. This background prepares them for positions at the regional or national level where budget preparation is larger in scope. High level budget officers work closely with Department of Agriculture and Bureau of the Budget officials, and in Congressional liaison, in presenting and evaluating Forest Service appropriations data.

Administrative management in the Forest Service opens a wide field of interest to the analytically minded business administration student. Leaders in this field are constantly improving the basic pattern of workload analysis, work program planning, budget control, systems analysis, inspection techniques, electronic data processing, and other management tools. They are instrumental in bringing about more realistic work programs, better planning and control, and realization of program objectives.

During the past several years another field of business administration, **administrative services,** has been rapidly expanding in the Forest Service. Administrative services requires sound business judgment in such fields as construction, supply, service contracting, and property and space management.

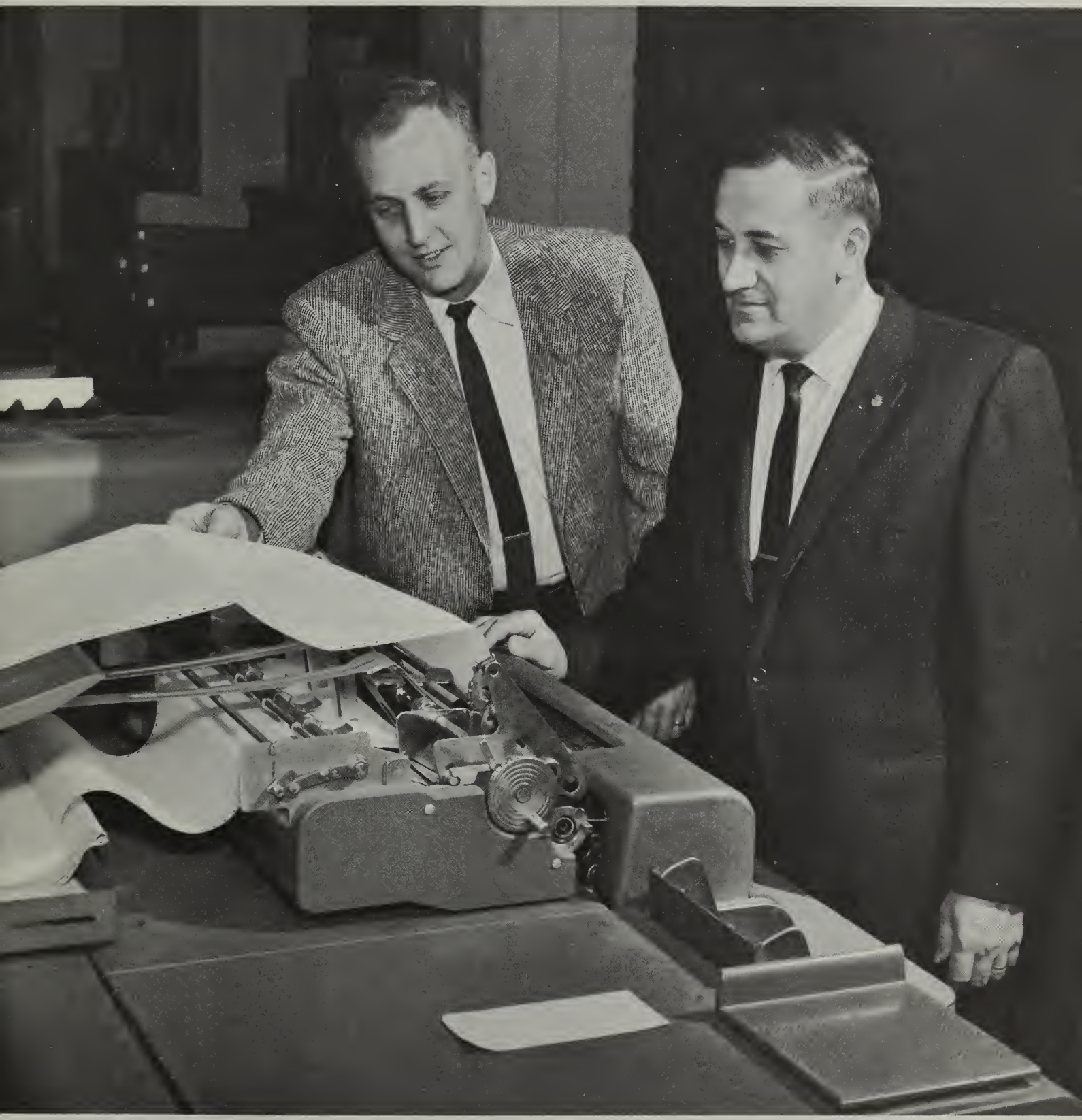
Prospects are that opportunities for growth, promotion, and a rewarding career in this line will continue to expand.

Personnel management offers challenging work to business administration graduates who are interested in people: helping others with their careers, finding qualified employees to fill job vacancies, and assisting to solve other man-power problems that become increasingly complex and stimulating each year. Personnel positions lead to careers in such areas as general personnel management, recruitment, training, position classification, safety, health, job welfare, and employee development.

There are opportunities to enter other fields, such as **public information and education,** for those who show ability and inclination in those directions.

Career Opportunities

The Forest Service offers excellent opportunities for training and career development. Widely scattered and diversified activities have resulted in numerous and frequent opportunities for a variety of work experience in an out-of-doors setting. This experience and training at field operating levels provides valuable background for positions at the regional or national level. Forest Service offices are located throughout the country, both in small towns and large cities. There is ample opportunity for moving from one location to another in the early days of a career. The Forest Service especially appeals to those with an active interest in the outdoors and a desire to help build and protect the country's natural resources.



Career Development

Business administration graduates usually enter the Forest Service at the GS–5 or GS–7 level. Those who qualify under the Management Intern Program begin at GS–7 or GS–9. Administrative employees usually receive a promotion at the end of the first year, or after 6 months for some employees under approved accelerated training agreements.

For beginning Forest Service employees, strong emphasis is put on training and development. Many new employees are assigned to a forest or research station on the staff of the administrative officer, who is in charge of forest business management. From these initial positions, careers open up to administrative officer or to regional office jobs in the specialty of the employee's choice and ability. Promotion of the employee to higher level positions is based on potential and proven ability, in competition with other qualified candidates. Career opportunities open to business administration graduates extend through GS–15 and higher.

How To Apply

To apply for these positions, you must pass the Federal Service Entrance Examination. For a higher entrance eligibility it is suggested that you also take the Management Intern Examination. You can get information on these examinations from a college placement officer or from your local post office. Or you can contact the Personnel Officer of the Forest Service regional office or research station nearest you. He will be glad to discuss your interests and career possibilities.

The U.S. Forest Service regional offices are at Missoula, Mont.; Denver, Colo.; Albuquerque, N. Mex.; Ogden, Utah; San Francisco, Calif.; Portland, Oreg.; Upper Darby, Pa.; Atlanta, Ga.; Milwaukee, Wis.; and Juneau, Alaska.

The U.S. Forest Service research stations are at Columbus, Ohio; Rio Piedras, Puerto Rico; Ogden, Utah; St. Paul, Minn.; Upper Darby, Pa.; Juneau, Alaska; Portland, Oreg.; Berkeley, Calif.; Fort Collins, Colo.; Asheville, N.C.; and New Orleans, La.

The U.S. Forest Service Forest Products Laboratory is at Madison, Wis.

Contract Specialist

GS–7 and GS–9

■ To carry out the programs of the U.S. Department of Agriculture requires the execution of thousands of contracts for the procurement of materials, services, research, and construction, and many more thousands of agreements with States, municipalities, universities, and foreign governments. The drafting and administering of these contracts is done by contracting officers who accomplish this work either individually or as members of teams of technicians, lawyers, and program administrators.

Work of the Contract Specialist

Contract specialists have the opportunity to work with top officials in Government and in business and professional fields. They have an opportunity to contribute substantially to the success of agricultural programs through the development and administration of clear, well-organized contracts and agreements. Contracting officers contribute to the economy and efficiency of program operations through the drafting of contracts which generate confidence and understanding by the prospective contractors and lower contract prices.

The contract specialist has extensive contacts with high-level administrative officials of the Government and with a broad segment of the business and professional world. He is looked to for advice on contracting through all stages of his development. The scope of his activities is limited only by his energy and capacity for learning.

Contracting officers have found their work in the Department of Agriculture to be rewarding and stimulating. Some of the present contracting officers have served the Department for 30 years. The complexity of contracting programs varies from that of simple contracts for supplies to contracts for foreign marketing activities, forest fire fighting, insect eradication programs, and laboratory construction; consequently, there is excellent opportunity for continued advancement to the more difficult and accordingly higher paid contracting officer positions, as the individual gains in knowledge and experience.

Training

The newly employed contract specialist is ordinarily assigned to work with experienced contracting officers, and under such direction, he immediately starts drafting contract provisions

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and handling contract administration problems. The jobs are located in all of the 50 States, Puerto Rico, and in several foreign countries. Contracting officers of the Department are progressively trained in the more complex contracting procedures as their performance indicates they are ready for advanced training.

Employment Opportunities

The number of openings in the field offices and in Washington, D.C., varies from time to time. Opportunities for advancement to higher grade levels are excellent for contract specialists who merit promotion on the basis of their performance.

Under the regular employment program the entrance level for graduates of accredited law schools, engineering schools, or business administration schools is grade GS–7. Graduates with master's degrees or higher education are considered for appointment at grade GS–9.

Employment Requirements

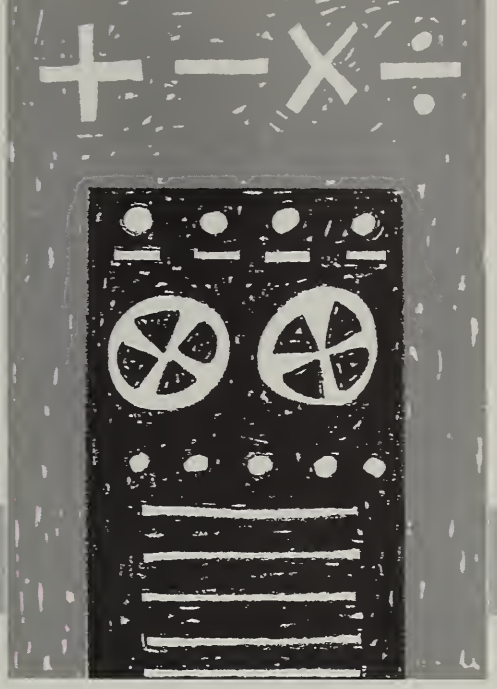
There is no written examination but personal interviews with staff members, either at Washington or at field offices, are required. For convenience, graduates and students who seek employment in Washington, D.C., or in a field office, are urged to arrange for appointments in advance.

How To Apply

You may obtain application forms and additional information from the Personnel Division, Office of Management Services, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Digital Computer Systems Analyst and Digital Computer Programmer



GS–5 and GS–7

■ The age of the computer began in 1947 in response to the complexities of the mid-20th-century modern world. From its original application in the field of science, the computer has now become an important tool of the manager. The computer's capacity to receive, store, act upon, and deliver vast quantities of information at electronic speeds has opened up a whole new dimension of management thought. Far from replacing the human being as manager, the computer has simply given him the capacity to be a much more efficient and effective manager. The vast quantities of information are more complete, systematically organized, and available in seconds. The use of automatic data processing (ADP) is freeing management from routine decision making and giving it the time and facts necessary for more scientific management.

The Federal Government, along with private industry, was quick to grasp the significance of the computer. Much of the early development work of computors was sponsored by the Government.

Since 1955 the Federal Government has been converting many of its accounting, statistical, personnel, and other management operations to electronic-data processing systems. ADP has the potential for facilitating one or both of management's key objectives: reduced costs and improved effectiveness of operations. It not only reduces clerical and accounting operations to the common denominator of routine, but also can be utilized more sophisticatedly to forecast, project, and simulate management activities.

The Department of Agriculture has been in the vanguard in the conversion of its fiscal, payrolling, and personnel functions to automation.

Job Opportunities

The Agricultural Stabilization and Conservation Service has electronic-data processing centers in Kansas City, Mo.; Evanston, Ill.; and New Orleans, La. The Statistical Reporting Service operates an electronic-data processing center in Washington, D.C. Personnel, payrolling, and other budget and fiscal activities of the entire Department are serviced by the Management Data Service Center in New Orleans.

Vital to the operation of the Department's program are its digital computer programmers and digital computer systems analysts. These are the people that are involved in the actual application of ADP to the management of the Department.

The Systems Analyst

The work of the systems analysts involves the design of systems for the electronic processing of subject-matter data. This includes the analysis of the present methods of accomplishing the program, the making of ADP feasibility studies, the development of functional and organizational changes to improve results, and the design of a system to the most effective use of ADP methods.

To do this, the systems analysts must have a good understanding of machine functions and capabilities and at least a general knowledge of programming techniques. He must have the ability to plan the most efficient organization structure, workflow procedures, and data-generation arrangements and the ability to integrate these into a complete ADP system.

The Programmer

Computer programmers normally use the flow charts that the analysts have prepared in their systems-design work and refine them into detailed machine-logic charts. These charts are the instructions which the computer uses to carry out its assignment. The final step in this process is the formulation of the code which is fed into the computer.

Programmers develop test data and routines to verify the completeness and accuracy of the ADP programs, as well as the adequacy of the operator instructions. They may also conduct studies in improving programming techniques.

The actual work of the analyst and the programmer varies considerably with the GS grade. The entrance levels of GS–5 and GS–7 are essentially trainee positions in which the trainee is expected to acquire rapidly: (1) the required subject-matter knowledge, (2) skill in systems analysis and designing, (3) programming techniques, and (4) understanding of computer capabilities and processes.

The higher level analysts and programmers are responsible for increasingly complex activities and are typically involved in the planning and operation of the overall ADP system.

Qualifications

Programmers and analysts are recruited at the GS–5 and GS–7 level. To qualify for GS–5, the applicant must have a bachelor's degree or applicable work experience. Those who qualify for GS–5 on the basis of education may also be eligible for GS–7 if they maintained a "B" average in college or graduated in the top 25 percent of their class. Graduate study, advanced degrees, or professional experience will qualify the applicant for entrance at higher levels.

While the knowledge of computers and ADP is an asset in this work, it is recognized that the number of people with this background is limited. Therefore, basic knowledge which is acquired fairly quickly is adequate, at least for the trainee who is new on the job.

The general qualifications which are required are: analytic ability, good judgment, ability to think logically, and tact and persuasive ability in dealing with operating officials.

Advancement

Programmers and analysts generally enter at the GS–5 or GS–7 level, depending upon their qualifications. After 6 months or a year, most are promoted to the next level; the 6-month promotion is possible under a specific training program. After the initial promotion, further advancement is based upon technical ability and merit. Both programmers and analysts can progress to the GS–12 level in their technical fields without assuming administrative or supervisory responsibilities.

Training

Systematic advancement is insured by opportunities for course study, as well as on-the-job training. Programmers and analysts have opportunities to attend special courses in the field of data processing; these courses are conducted by the Civil Service Commission, USDA, and equipment manufacturers.

Employment Procedure

For information on how to apply for a job as a programmer or analysts, you may write to:

Personnel Division
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

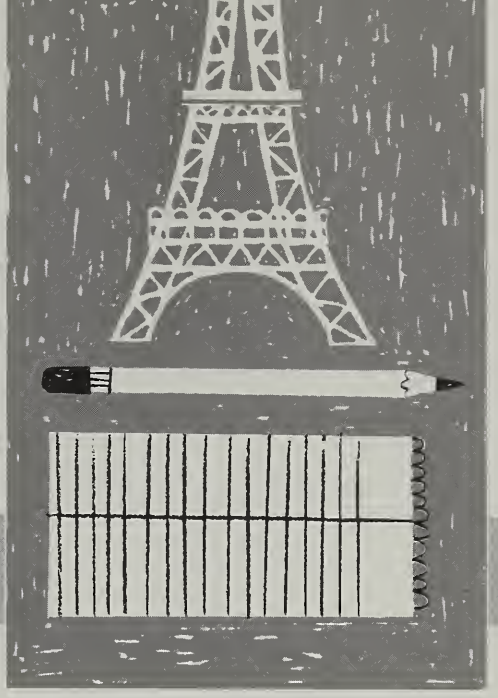
Kansas City ASCS Management Field Office
ASCS–USDA
P.O. Box 205
Kansas City, Mo., 64141

New Orleans ASCS Commodity Office
ASCS–USDA
Wirth Building, 120 Marais Street
New Orleans, La., 70112

Evanston ASCS Commodity Office
ASCS–USDA
2201 Howard Street
Evanston, Ill., 60202

Secretary

(Overseas)



GS–5—GS–8

■ A challenging, stimulating, and enriching career as an international secretary is available to young women with superior secretarial-stenographic skills.

The functions of the Foreign Agricultural Service are accomplished by a staff of professional, technical, and administrative employees in Washington, D.C., and agricultural attachés and officers stationed at over 60 embassies and consulates throughout the world. A supporting staff of secretaries is carefully selected for assignment to these posts as vacancies occur.

The Secretary's Role

The secretary is a key member of the attaché's staff. As principal secretary to the agricultural attaché, she is expected to handle a number of operating contacts bearing on the success of agricultural representation at the post; and to apply initiative and discretion in handling a variety of clerical, secretarial, and administrative duties necessary to the efficient operation of the attaché's office. To perform effectively, she must be conversant with the agricultural program objectives and with Federal Government procedures, particularly those applicable to the Foreign Agricultural Service. This knowledge can best be gained through on-the-job training with the Foreign Agricultural Service in Washington, D.C., prior to overseas assignment. Secretaries employed under this career plan normally should expect to spend one year in Washington, D.C.

Career Development

Post Preference

Upon completion of on-the-job training in Washington, D.C., the secretary is assigned to a foreign post. Expression of personal preferences as to post is welcomed and carefully considered in the assignment process; however, no assurance can be given that the employee will be assigned to the post of her choice, since assignments necessarily must be based upon the needs of the Service. However, as she acquires seniority with the Foreign Agricultural Service, there will be greater opportunity to realize her post preference.

Orientation Training

After post assignment is determined, the next step is to prepare the secretary for it. She will attend the Foreign Service Institute of the Department of State in Washington, D.C., to learn what a foreign post is, how she will fit into it, what her problems are most likely to be, and protocol of diplomatic service. Along with this, Foreign Agricultural Service will schedule within the Department of Agriculture individual orientation training related to the post of assignment. Foreign language training may also be involved before departure from Washington, D.C., or after arrival at the post of assignment.

Career Rotation

The fact that Foreign Agricultural Service positions in Washington, D.C., and at foreign posts are in the competitive civil service permits the fullest utilization and development of career

personnel through rotation of assignments. Prior to completion of a tour of overseas duty by the employee, negotiations are underway concerning her subsequent assignment at the same or a different post, or with Foreign Agricultural Service in Washington, D.C. Following home leave in the United States, with travel at government expense, the employee reports to her next duty station.

Advancement Opportunities

The first oversea assignment normally will be at grade GS–5. However, opportunities for advancement are available to those who assume greater responsibilities and demonstrate potential and flexibility for rotation between positions in Washington, D.C., and foreign posts in accordance with the needs of the Service.

Qualifications and Requirements

In order to be considered for the position of secretary (stenographer), GS–5 level, the applicant must have career civil service status or have eligibility for reinstatement by having acquired such status under previous Federal employment. The applicant must meet the experience and training requirements set forth by Civil Service Commission standards—3 years of quality experience, or a combination of training and experience equivalent to 3 years of experience. Stenographers interested in eventual overseas assignment also are recruited for prior service in the Washington, D.C., office at GS–3 and GS–4. Normally, for positions at these levels, the Foreign Agricultural Service selects applicants who have qualified in the Civil Service Commission Stenographer Examination.

Additional requirements for oversea assignment:

- 21 years of age, single with no dependents.
- High school graduate.
- American citizen for 10 years.
- Excellent health.
- Favorable full field personnel security investigation.
- Availability for assignment on a worldwide basis.
- Tactfulness, mature judgment, initiative and ability to work independently.
- Ability to adjust quickly to new and varied working and living conditions.
- Poise, personal dignity, neatness, and good grooming.

Allowances and Benefits

In addition to the regular annual leave and sick leave granted, career overseas employees are eligible to earn home leave. Home leave may be granted for return of the employee to the United States, with travel at Government expense, between two tours of overseas duty. In some instances, career employees assigned abroad are eligible for quarters allowance and a cost-of-living allowance, in addition to the regular salary. However, these allowances are subject to change as conditions change.

Under the Foreign Service Act, oversea employees are eligible for health benefits that provide for the payment by the Government of hospitalization costs for the treatment of an illness or injury incurred while serving abroad. Benefits, in addition to or in lieu of those received under the Foreign Service Act, are provided for under the Federal Employees Compensation Act.

How To Apply

If you desire further information about the Foreign Agricultural Service and how to become a part of it, write to:

Director, Personnel Division
Foreign Agricultural Service
U.S. Department of Agriculture
Washington, D.C., 20250

Section III

PART 2

CAREERS IN AGRICULTURAL MARKETING

U.S. Department of Agriculture

Agricultural Market Reporter

(Dairy and Poultry)

GS–5 and GS–7

■ The dairy and poultry market news reporter helps provide a vital service to producers, processors, shippers, handlers, merchandisers, and others associated with our dynamic, ever-changing poultry and dairy industries.

He is part of a team of competent, fast-moving individuals who together comprise the Dairy and Poultry Market News Service of USDA's Agricultural Marketing Service.

Duties

These market news reporters play an important role in continuing the established tradition that "the market news always gets through." They gather and report factual, reliable market information all during the trading day, so that buyers and sellers know the conditions of the market when it opens, during the height of trading, and at the closing.

Market news gets the facts "on the table," so that buyers and sellers will have reliable information upon which they can base their decisions of when to sell, where to sell, when to buy, and where to buy.

In gathering information, the market news reporter is in touch with trade groups at the major markets and shipping areas. He finds out who to see and where to go to get the "feel" of the market. He learns to sift fact from fiction and to analyze the information he gathers. He assembles data on prices, supplies, demand, and movement of dairy and poultry products, and prepares summaries that give a clear picture of the current market for these products.

Once his reports are assembled and completed, the market reporter must get his facts out within minutes to those who urgently need them. In doing this, the reporter utilizes the 19,000-mile leased teletype system of AMS, which is a "two-way street" with a constant flow of market information going out as well as coming in. He also makes use of all media of communications for reaching the public, including radio, television, newspapers, and mimeographed reports sent through the mail.

To perform this highly important work, the market reporter must be an individual of the highest integrity, and must continually employ diplomacy in his relationships with people from industry. He must be able to express himself aptly in speech and in writing, both in gathering information and in reporting it.

The Dairy and Poultry Market News Service has 36 field offices which report market information across the country, and reporters may be assigned to any of these as the need arises. Through travel, the reporter gains wide experience since marketing practices frequently differ in the various areas. In recent years, market news offices have gradually moved away from the traditional market centers and into the areas where the products originate.

Training and Advancement

Dairy and Poultry market news reporters enter on duty at the GS–5 level, or at the GS–7 level if they have had the necessary education and experience. Those who enter at GS–5 are placed

in an intensive 6-month on-the-job training program. Once they satisfactorily complete this training, they are promoted to GS–7. Then, after 1 year of satisfactory service at the GS–7 level, they are eligible for promotion to the GS–9.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a bachelor's degree in agricultural economics, dairy or poultry husbandry, or dairy manufacturing. Background in general economics, statistics, and journalism is also desirable. Applicants for GS–5 positions must pass the Federal Service Entrance Examination and will probably be required to have a personal interview with staff members located in one of the market news offices. Appointment to a GS–7 position requires a combination of education and experience or graduate study in marketing of dairy and poultry products.

Employment Procedures

For further information, you may write to any one of the following offices nearest your home:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20871

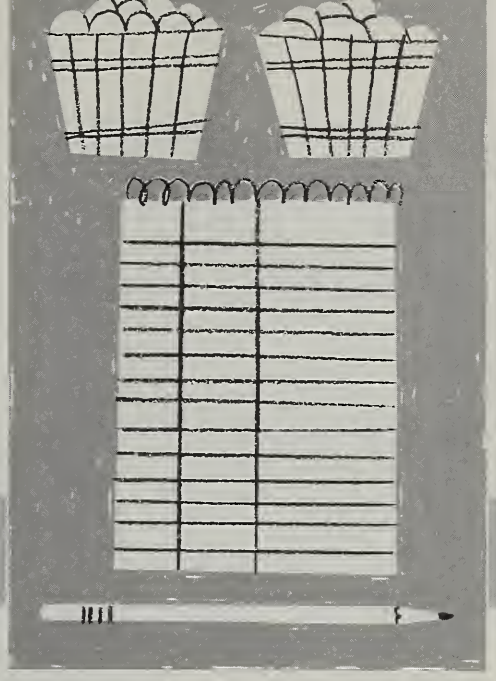
CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

U.S. Department of Agriculture

Agricultural Market Reporter

(Fruit and Vegetable)



GS–5 and GS–7

■ The market news reporter is the "eyes and ears" of the fruit and vegetable industry. Growers, shippers, and receivers all depend on the market reporter for accurate, timely reports on market prices and conditions—the information they need to make their marketing decisions.

Duties

The fruit and vegetable market reporter is part of a nationwide team of market news men, gathering information on more than 100 commodities in production areas and at terminal wholesale markets throughout the country.

The information gathered by this expert team of market analysts is flashed across the country by 19,000 miles of leased teletype wire and relayed to hundreds of radio and TV stations, newspapers, and other news media so that everyone who needs the information can get it as quickly as possible.

Each day the market reporter gets out where the trading is. He talks to buyers and sellers to get the latest information on supplies, rate of movement, demand, and quality of the produce moving to market. He looks over the various fruits and vegetables available, learning where they were grown, the types of containers, and their condition.

He analyzes all of this information on the basis of his own experience in the marketing of produce and relates it to previous days and years. He must bring to this analysis a thorough understanding of marketing, economics, and management. Above all, he must be fast and accurate.

The good market reporter has to be a good journalist, too, for the market report must be gotten to the waiting audience. The market reporter feeds it to other areas via the leased wire system, and then uses radio, television, and newspapers to get the information out in his own area. Many reporters go on the air themselves with daily market reports.

Qualifications and Advancement

The typical market news reporter today is a college graduate, with a major in agricultural marketing, agricultural economics, or horticulture. He enters the service at the GS–5 level. A capable reporter can expect to advance to the GS–7 level in 1 year. Most of the market news reporting positions are at the GS–9 and GS–11 levels; the reporter can expect to advance to the GS–9 level at the end of his second year, and to the GS–11 level after 3 or 4 years of experience as a GS–9 "journeyman" reporter. Advancement to GS–12 and GS–13 depends on individual capacitites and initiative—particularly talents for administrative and supervisory responsibilities.

Training

The beginning reporter is given a period of intensive on-the-job training, where he learns the techniques of market reporting under the close supervision of an experienced reporter. At the completion of this training he is usually assigned to one of the seasonal reporting offices and gradually advanced to larger offices with more responsibility.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a bachelor's degree in horticulture, agricultural marketing, or agricultural economics. Applicants for GS–5 positions must pass the Federal Service Entrance Examination and have a personal interview with staff members of one of the market news offices. College graduates who rank in the upper 25 percent of their classes, or have a "B" average, may qualify for a GS–7 position without taking a written test.

Employment Procedures

For further information, you may write to one of the following offices:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

U.S. Department of Agriculture

Agricultural Market Reporter

(Livestock and Meat)

GS–5 and GS–7

■ The livestock and meat market reporter plays a vital role in marketing two of this country's most valuable farm products.

He is a member of a fast-moving and efficient team, the Livestock Market News Service, in USDA's Agricultural Marketing Service.

Duties

Every working day, members of this 84-man team are out where the trading is going on—at large central stockyards, auction markets, feedlots, packing plants, or meat warehouses. There they gather, by personal observation and through contacts with members of the trade, the information that farmers and others engaged in marketing of livestock and meat so urgently need—prices, demand, supplies, and movement. These are the data that are needed to keep our vast national marketing system operating at peak efficiency.

Then the reporter must get his carefully gathered information out to his waiting audience through all available media—radio, television, newspapers. He may go on the air himself, often right from the stockyards.

Throughout the trading hours, the reporter constantly feeds his information back to his office where it goes out over the AMS 19,000-mile leased wire for use by buyers and sellers all across the Nation.

To perform this important and exacting job takes a combination of talents. The reporter must be a competent judge of livestock with respect to grade and weight. He must be a diplomat in his relationships with the public and be a keen judge of character in determining reliable sources of information. He must be constantly alert to separate fact from fancy and be able to express himself both orally and in writing, and, therefore, must be something of a journalist.

He must strive to master the fundamentals of management, economics, and marketing, in addition to keeping currently informed on the national livestock picture. Above all, he needs to develop speed and accuracy; the value of market news is related directly to how fast it is disseminated—and it is of no value at all if it is not accurate.

The "freshman" GS–5 reporter gets an intensive 6-month training course under the supervision of seasoned reporters. He receives extensive work in grading livestock, including frequent grading correlations where the live animal grade is compared with the carcass grade assigned by official meat graders. He also gets acquainted with the basic techniques of meat grading so that he will understand the grading operation and have a background for reporting on the wholesale meat trade. If he satisfactorily completes his basic training, he is promoted to GS–7 at the end of 6 months.

Applicants hired at GS–7 receive much of the training given the GS–5, but the training is accelerated. Also more progress is expected and required.

The first reporting assignments are usually in gathering basic sales information. As the reporter's training progresses, he is given added responsibilities until he becomes fully capable of reporting a livestock market. He may be promoted to the GS–9 level after 1 year as a GS–7,

if he shows the required degree of ability, aptitude, ambition, and willingness to obtain wide experience.

The GS–9 level is considered the journeyman position and further promotion depends primarily upon the individual's capacities and initiative, particularly his talents for administrative and supervisory responsibilities.

The Livestock Market News Service maintains 43 offices scattered across the country and reporters may be assigned to any of these offices as the need arises. Most beginners are stationed initially in the Midwest, where a good cross section of all classes of livestock pass through the markets and neophyte reporters can achieve the necessary training in reporting on all species.

Employemnt Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a bachelor's degree in animal husbandry. Applicants for GS–5 positions must pass the Federal Service Entrance Examination and will be required to have a personal interview with staff members located in one of the market news offices.

College graduates who rank in the upper 25 percent of their class, or have a "B" average, may qualify for a GS–7 without taking a written test.

Employment Procedures

For further information, you may write to any one of the following offices nearest your home:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

U.S. Department of Agriculture

Agricultural Marketing Specialist

(Commodity Programs)

GS–5 and GS–7

■ Dating from the beginning of the price support programs of the 1930's, the Government has been a dominant factor in the marketing of agricultural commodities. Without aspiring to the role, the Government is today the largest single user of grain transportation facilities and the largest merchandiser of grain.

Before the Feed Grain Program of 1961, the Department of Agriculture operated more as the custodian of agricultural commodities, than as an active seller in the market. However, under this program and related policies, the role of Government has changed from that of a custodian to that of an active merchandiser. In 1962, for instance, the Department was the dominant supplier of corn into the market, and by virtue of the size of its holdings, the Department had the capacity to influence the value of the entire crop.

The management and marketing of the Government inventory is a complex and technical activity requiring the agricultural marketing specialist to be extremely alert, sensitive to the trends of the market, and able to make quick decisions. The marketing specialist applies his knowledge of commodity production, processing, and merchandising methods and facilities to the marketing of Government-owned commodities. Through this work he is a vital link in the Department of Agriculture's policy of reducing its agricultural inventories to a reasonable and manageable size.

In 1961, for instance, the marketing specialists of the Agricultural Stabilization and Conservation Service (ASCS) were confronted with the challenge of selling over a billion bushels of feed grains from the Government inventories. This unprecedented selling operation was conducted through the usual and customary channels of trade, and it stimulated the entire grain market to a new high level of activity. Government selling on this scale puts the Department in the position of exerting great influence in the markets of the United States.

Job of the Marketing Specialist

The agricultural marketing specialist participates in the formulation of plans and procedures for the disposition of commodities in his geographical area. This involves advising and assisting commodity, transportation, warehousing organizations, and other trade groups.

The marketing specialist studies market and storage conditions, price trends, and transportation factors and makes recommendations toward revising or supplementing programs in his area.

Agricultural marketing specialists collaborate with State and county committees on farm storage aspects of loan and purchase programs and coordinate commodity operations with the activity of other branches of ASCS. They analyze storage and availability reports and records and recommend commodity stock purchases and sales. Agricultural marketing specialists also study crop reports, trade journals, and market data to determine price trends. In addition, they formulate procedures, instructions, and contracts necessary for the efficient operation of the commodity programs.

In an agency such as ASCS, there are several specialized fields in which an agricultural marketing specialist may be trained. These fields are

related to the commodities and programs which ASCS handles. For example, an individual with the appropriate training and specialization may eventually become an expert in the various grain programs and therefore become a grain marketing specialist. By the same token, he may also become a cotton marketing specialist, a fats and oil marketing specialist, a dairy products marketing specialist, or a marketing specialist particularly concerned with processed commodities. The area of specialization in which an individual would ultimately be placed depends upon that individual's background, experiences and choice.

Location of Work

Since the commodity programs which ASCS administers are nationwide, the jobs are not limited to the Washington, D.C., area. Agricultural marketing specialists are employed in the four commodity offices of ASCS in Evanston, Ill.; Kansas City, Mo.; Minneapolis, Minn.; and New Orleans, La. The Evanston and Kansas City offices are primarily grain offices and are staffed principally by grain marketing specialists. Since the Minneapolis office deals with processed commodities, the marketing specialists employed there are concerned with such programs as dairy products, oils, and miscellaneous products. The prime concern of the New Orleans office is with the cotton programs and, accordingly, it is particularly interested in the cotton marketing specialist. However, each of these offices, as well as the central office in Washington, hires a certain number of marketing specialists in various other options as well.

Training and Promotions

The marketing specialist trainee, who is employed at the GS–5 level, receives an extensive, as well as intensive, training course which includes on-the-job instruction under highly qualified specialists. Promotion to the GS–7 level is made as soon as the trainee has satisfactorily completed a 6-month training course. An individual can progress to the GS–9 level after he has demonstrated his ability at the GS–7 level. This promotion can usually be attained in 1 year to 18 months. Promotion to GS–11 is also usually attained in 1 year to 18 months, if the individual has demonstrated the necessary knowledge and accomplishments required in the job.

GS–11 is considered the "journeyman," the level at which an employee carries out most marketing specialist duties with a minimum of supervision. Of course GS–11 is not the top level to which a marketing specialist can progress and further advancement depends upon an individual's potential and initiative, usually in the supervisory area.

Qualifications

To qualify as an agricultural marketing specialist, one must have a background in agricultural economics, marketing, transportation, or business administration. A combination of education or work experience and background may be acceptable if appropriate. Applicants for GS–5 positions must pass the Federal Service Entrance Examination.

How To Apply

If you are interested in a career as an agricultural marketing specialist and wish additional information about the opportunities the Agricultural Stabilization and Conservation Service offers, write:

Personnel Management Division
Agricultural Stabilization and Conservation Service
U.S. Department of Agriculture
Washington, D.C., 20250

U.S. Department of Agriculture

Agricultural Marketing Specialist

(Fruits and Vegetables—Program)

GS–5 and GS–7

■ Today's fruit and vegetable grower often faces bigger problems in marketing his crop than in producing it. He has to deal with a rapidly changing market, concentrated buying power, and consumer demands for higher quality and better packaging. The specialist in marketing agreements and orders for fruits and vegetables helps growers to analyze and solve these important marketing problems.

Marketing orders are dynamic self-help programs through which growers work together to solve marketing problems that are too big for them to solve alone. Marketing orders are now in effect for 45 different fruit, vegetable, and tree nut crops grown in 27 States. The products handled under these programs have a farm value of well over a billion dollars a year—40 percent of the farm income from all out fruit and vegetable crops.

Duties

The marketing specialist plays a key role in the smooth functioning of these programs. He needs to know horticulture and the problems that the growers and shippers face. Just as important he must be a diplomat—for the success of these programs depends on thorough understanding and strong support from the industry itself.

It is the job of the marketing specialist to help the farmers and shippers analyze their problems and discover how a marketing order might help in their situation. He has to gauge the industry's awareness of its marketing problems and its active support of positive measures for coping with them.

If the industry is ready to work seriously toward a marketing order program, the marketing specialist helps design a program tailored to its needs and conditions. This is highly important, since the program's success depends heavily on a "neat fit" to the situation.

The most important work is done after the marketing order goes into effect; that is, helping the industry use it most effectively.

All in all, the marketing specialist gets valuable experience in analyzing agricultural industries and their economics and in dealing with the farmers, shippers, and other businessmen who make up these industries.

Training

The "rookie" marketing specialist (GS–5) gets an intensive 6-month training course under highly trained specialists. In some cases he travels in the field to get firsthand experience with marketing orders. If he satisfactorily completes the 6-month course, he is promoted to GS–7 and can progress to GS–9 within a year or 18 months. GS–11 is usually attained several years later if he has shown the potential for effectively handling a wide range of assignments.

The GS–11 level is considered the "journeyman" position for a marketing specialist, and further promotion depends on the individual's capacities and initiative—particularly his talents for administrative and supervisory responsibilities.

Most of these positions are located in Washington, D.C., but there are several positions in each of five regional offices at: Berkeley and Los Angeles, Calif.; Lakeland, Fla.; Portland, Oreg.; and McAllen, Tex.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a bachelor's degree in horticulture or closely related agricultural subjects, plus ability to make effective contacts with producers, handlers, and farm organizations. Applicants for GS–5 positions must pass the Federal Service Entrance Examination. College graduates who rank in the upper 25 percent of their class, or have a "B" average may qualify for a GS–7 without taking a written test.

Employment Procedures

For further information, you may write to Personnel Division, Employment Section, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Agricultural Marketing Specialist

(Fruits and Vegetables—Regulatory)

GS–5 and GS–7

■ *"Good afternoon. PACA Office."* Those are familiar words to fruit and vegetable growers and dealers throughout the country. Growers and dealers are accustomed to calling the PACA office—more formally known as the Regulatory Branch, Fruit and Vegetable Division—when they have a contract dispute, when someone has failed to pay for their produce, or when they just need advice on dealing under the Perishable Agricultural Commodities Act.

The regulatory marketing specialist is the man they call.

The Perishable Agricultural Commodities Act was set up many years ago at the request of the produce industry. Produce men deal in fast-moving, highly perishable commodities, and they have to depend on the good faith of those they deal with. So PACA sets up a code of fair play, under which the fruit and vegetable industry carries on its day-to-day operations.

Duties

The big job of the regulatory marketing specialist is to handle the complaints that come under the Act. It's engrossing work.

Suppose a carload of potatoes from Maine arrives in New York. The receiver says they're in poor condition, and won't meet the terms of his contract. He wants to reject the carload. The shipper, on the other hand, feels the carload did meet the contract terms. They're deadlocked. What do they do? Call PACA.

The PACA man first will try to get all the facts from both sides. Then he'll explain how the law and the regulations fit this case. Usually, he can arrange an informal settlement, with the shipper and receiver agreeing on conditions that are fair to both.

If they can't agree on an informal settlement, one of them may file a formal complaint. Then the PACA man submits the complaint, with all the facts and his recommendation, to USDA's legal officers for a decision.

The PAC Act also requires that interstate traders in fruits and vegetables hold licenses, and the PACA man is responsible for licensing dealers in his area.

Basically, the PACA man is a "referee." He makes sure that everyone in the produce game follows the rules laid down under the PAC Act, so everyone has a fair chance. Obviously, it calls for tact and diplomacy of the highest order. Regulatory specialists say their work is fascinating because of the variety of mental demands and the variety of people they meet.

PACA men make a lot of personal contacts throughout the produce industry. They often make personal investigations of complaints—auditing books and records of produce firms and interviewing the parties involved. Travel is frequent, but extended trips are unusual.

Training and Advancement

The regulatory marketing specialist starts as a trainee at the GS–5 level, and receives an intensive 6 month training course. He learns the provisions of the law, the PACA regulations, and the practices of the produce industry.

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After he successfully completes the training course, he is promoted to GS–7 and given his first assignment. Normally, he is assigned to one of the five field offices in New York City; Los Angeles, Calif.; Ft. Worth, Tex.; or Winter Haven, Fla. These offices each cover PACA work in several States. After 1 year at the GS–7 level, the specialist is usually ready to advance to GS–9. Opportunities for promotion to GS–11 and GS–12 are excellent for the individual who demonstrates analytical ability, technical skill, and initiative.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a bachelor's degree in an appropriate field. Applicants for GS–5 positions must pass the Federal Service Entrance Examination, and will have an interview with staff members in one of the field offices or in Washington, D.C. Applicants who ranked in the top quarter of their college graduating classes, or have at least a "B" average, may qualify for a GS–7 position without taking a written test.

Employment Procedures

For further information, you may write to any one of the following offices nearest your home:

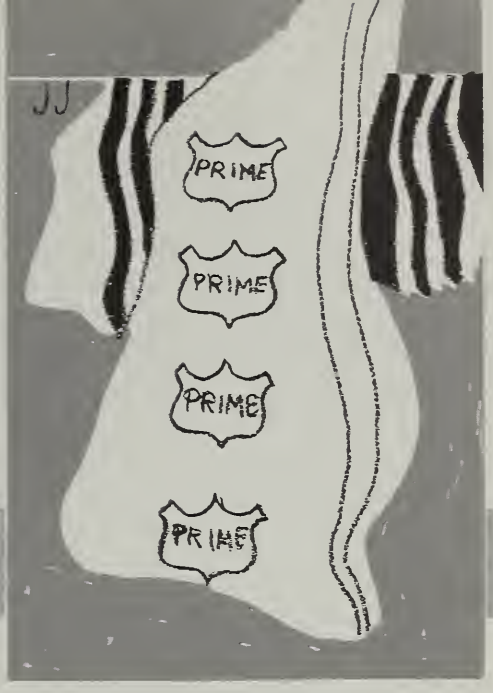
EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

WAAD, Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

Agricultural Marketing Specialist

(Livestock and Meat)



GS–5

■ The Federal meat grader plays a key role in the marketing of a food which is vital to the health and economic well-being of our Nation. Meat is the most important source of protein in our diet. Farmers receive more than one-third of all their cash income from livestock. Consumers spend about 20 percent of their food budget for meat.

Accurate identification of the quality of meat, then, is of tremendous significance. And this is the job of the meat grader.

Duties

The beginning livestock and meat marketing specialist will become either a meat grader or a standardization specialist in the Livestock Division of USDA's Agricultural Marketing Service. Most become meat graders and work out of one of the many field stations located throughout the United States. Only occasionally is there an opening on the small staff in Washington which works on the development of grade standards.

However, every meat grader must become an "expert" on the official standards for grades of beef, veal, lamb, and mutton—for these are the tools of his trade.

Meat grading is largely a subjective process, depending upon the grader's knowledge, skill, and judgment. It is a responsibility he cannot take lightly, for a higher, or a lower, grade often means a considerable difference in price. And meat grading is a voluntary service, for which the user pays a fee.

The grader, therefore, must be sure of his judgments and able to defend them if challenged. And he must be something of a diplomat to foster good relations with those employing the meat grading service, while still maintaining his integrity and that of the Federal service.

Meat graders may be transferred from one station to another, and to different parts of the country as staffing needs change. Such transfers serve to broaden the experience of the grader, since the nature of the work varies in different sections of the country. Graders receive continuous guidance from supervisors in their area and from the grading service's national technical supervisors. The meat grader can be promoted to a supervisory job if he displays the potential for administrative responsibility.

Training and Advancement

A meat grader trainee starts at the GS–5 level and receives an intensive 6 months of on-the-job training. This includes temporary details to three or more field stations at important livestock marketing and meat packing centers. Here he practices actual grading under the close supervision of an experienced meat grader, learning to evaluate individual grade factors and combine them into a final grade. Gradually, he is given more difficult grading assignments and less supervision. He also learns the fundamentals of the "acceptance service"—that is, the examination and acceptance of meat products for conformance with detailed purchase specifications.

Basic to all of his other training is the trainee's study of the grade standards. He learns the

history and the theory of the grade standards—why up-to-date standards and uniform application of them are important to fulfill industry needs for a meaningful system of market indentification.

He finds out how new grade standards are developed and older ones revised and learns how to evaluate research results for possible application in improving the grade standards.

And the trainee learns how the meat grading program is operated and the policies which guide it. He also becomes acquainted with the closely related livestock and meat market-reporting work of the Livestock Division.

Finally, after successful completion of his 6 month training period, the beginning meat grader is promoted to the GS–7 level and gets his first regular meat grading assignment. But his education continues. And as he learns and progresses, he will qualify for more responsibility and higher grades. He is promoted to the GS–9 level after 1 year as a GS–7, if he progresses satisfactorily and demonstrates that he can perform the duties of the higher grade position.

Outstanding individuals may advance to GS–11 within 3 to 4 years. Competition for higher grades is keen, and only those who show supervisory and administrative talent are selected. Appointment to GS–13 and GS–14 jobs is possible, but usually only after the grader has served at the GS–12 level for at least 4 to 5 years.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a degree in animal husbandry. You must have completed courses in both livestock judging and meat judging. Good health is necessary, since meat grading, in addition to the mental discipline required, is hard physical work and the grader is subjected to frequent and sudden temperature changes. The ability to drive an automobile is desirable.

Applicants for GS–5 positions must pass the Federal Service Entrance Examination.

Employment Procedures

For further information, write to the Personnel Division, Employment Section, Agricultural Marketing Service, Washington, D.C., 20250.

Section III

PART 3

CAREERS IN AGRICULTURAL PROGRAMS

U.S. Department of Agriculture

Agricultural Commodity Grader

(Processed Fruits and Vegetables)

GS–5

■ The processed fruit and vegetable grader is part of a nationwide team of quality experts who play a vital role in the efficient operation of our far-ranging marketing system.

Duties

Processors, retailers, and dealers all over the country depend on USDA's grading team for impartial, expert evaluation of processed fruit and vegetable quality.

A buyer in New York, for instance, can get his supplies from a processor 3,000 miles away—without ever seeing the processor or the products. He can do this with confidence, because an official inspection certificate, issued by a USDA grader, tells him exactly what he is getting.

Many processors, too, depend on this grading team to help them process their products to U.S. grade standards. A grader is often stationed in the processing plant as resident inspector (1) to make continuous checks on all the processing steps, sanitation, and quality control and (2) to grade the product as it is being packed.

Basically, of course, the grader must become a quality expert. Effective grading depends on the grader's knowledge, skill, and judgment. It is a responsibility he cannot take lightly, for a higher or lower grade often means a considerable difference in price.

He must also be something of a diplomat, in fostering good relations with the firms that use inspection, and in working with the firm's employees to get the inspection job done.

Training

Normally, the processed fruit and vegetable grader starts at the GS–5 level. He receives intensive formalized training for the first 6 months to qualify him as a full-fledged grader. During this 6 month period he gets instruction in microscope work, in drawing a representative sample, and in the use of the visual aids and the other inspection techniques that have been developed to help him apply the U.S. grade standards accurately.

He also studies the grades themselves—the basic tools of his trade. These grade standards form a common trading language for the whole industry, and standardized interpretation of the grades is vital.

Advancement

After satisfactory completion of the 6-month training program the grader is promoted to GS–7, and gets his first regular assignment. Of course, he continues to learn, and advancement to the journeyman level (GS–9) may take place within 1½ to 2½ years.

Outstanding individuals and those who show supervisory and administrative talent may advance to the supervisory levels (GS–11, 12, and 13). Competition for these higher grades is keen, however.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on

education alone you must have a bachelor's degree in the agricultural or biological sciences, including 8 hours of chemistry. No written examination is required—only a personal interview with staff members in one of the 30 field inspection offices maintained by the inspection service throughout the country.

Employment Procedures

For further information, you may write to any one of the following offices nearest your home:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

U.S. Department of Agriculture

Agricultural Commodity Grader

(Grain)

GS–5 and GS–7

■ Making sure that grain of dependable quality moves into our domestic and export marketing channels is the job of the grain inspector (agricultural commodity grader).

Nearly all the grain that is shipped through these channels is inspected and graded according to standards set by USDA's Agricultural Marketing Service. And the men who supervise this work are inspectors employed by the Grain Division of USDA's Agricultural Marketing Service.

Duties

The AMS grain inspector observes and, when he finds it necessary, corrects the methods used by licensed inspectors—who are employees of States, as well as private and commercial inspection agencies. He does this to insure that the grades they assign are accurate and uniform. Working out of a district grain inspection office, he is right on the site of the terminal market, or the export market, to observe whether licensed inspectors are performing their duties according to the methods specified under the U.S. Grain Standards Act.

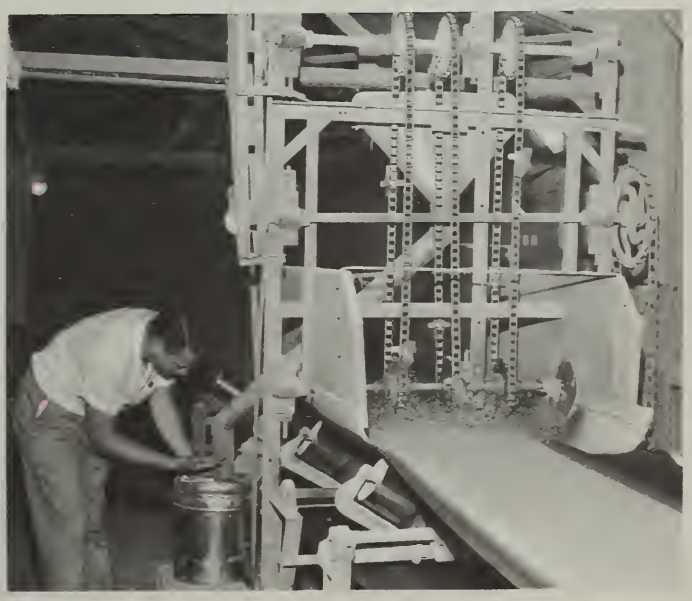
He also makes laboratory tests on samples of such grains as wheat, corn, soybeans, grain sorghum, oats, barley, and flaxseed to check the accuracy and quality of their work.

The grain inspector develops the necessary skills to carry out aptly the supervisory checks of the work of licensed inspectors. He must constantly use diplomacy and tact in his relationships with licensed inspectors and with trade people. He must act as a mediator in handling inspection appeals when applied for by persons who disagree with the inspectors' grade determinations. And he acts as a law enforcement agent in enforcing the law under which the inspections are made.

The grain inspector also may inspect and grade certain products that are related to grains, such as rice, dry beans, peas, and lentils. The products are inspected under a service which is provided to trade people who request it.

Advancement

Grain inspectors enter on duty at the GS–5 level, or at the GS–7 level if they have the necessary education or experience. Those who enter at the GS–5 level, will probably progress to GS–7 in 1 year and to GS–9 in another year.



Those who are willing to transfer from one location to another in order to gain broader experience and who show a potential for higher level administrative, supervisory, and technical work may reach the GS–11 level after another 3 or 4 years, depending on when vacancies occur. The GS–12 and GS–13 positions are highly competitive, but men who are outstanding in executive ability, tact, and diplomacy and who have demonstrated complete mastery of all the technical aspects of grain inspection work reach these top positions.

Employment Specifications

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a bachelor's degree in agriculture. Applicants need not take a written test.

Employment Procedures

For further information, you may write to any one of the following offices nearest your home:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

Crop Insurance Fieldman

GS-5

GS-7

Crop Insurance Supervisor

■ For people with general farm backgrounds and an interest in assisting farmers in their vital role in the American economy, there are many challenging jobs within the Department of Agriculture. Among these are the Federal Crop Insurance Corporation (FCIC) positions of crop insurance fieldman, GS–5, and crop insurance supervisor, GS–7.

Nature of the Work

The FCIC was created February 16, 1938, by the Federal Crop Insurance Act to "promote the national welfare by improving the economic stability of agriculture through a sound system of crop insurance and providing the means for the research and experience helpful in devising and establishing such insurance." Insurance coverage is now available for 22 crops in 38 States.

Crop Insurance Fieldman

The fieldman explains and sells crop insurance to farmers within an assigned geographical district. He continuously seeks out prospective buyers and develops means of advertising and promoting the crop insurance program. This brings the fieldman into contact with various community and county organizations, banks, and civic groups, as well as farmers, affording him the opportunity to become acquainted with communities and to contribute to their development and security through the FCIC program.

The fieldman obtains and spot checks acreage reports from the farmers; these reports are used to establish the premium rates and coverages under the crop insurance contract. He also collects the insurance premiums.

The fieldman visits farms and inspects damaged or destroyed crops, determines time and causes of loss, amount of insured acres, and arrives at an equitable adjustment of loss after careful analysis of all pertinent facts. From time to time the fieldman assists in evaluating the productivity and risk of farms to determine the correct actuarial bases used in establishing rates and coverages.

While the fieldman is on the job he is given opportunity to learn about the total crop insurance program and to train for the next higher level in fieldwork. After a year of successful service the crop insurance fieldman, GS–5, is normally ready for promotion to crop insurance supervisor, GS–7.

Crop Insurance Supervisor

The crop insurance supervisor, GS–7, is concerned with training and leadership responsibilities in organizing sales campaigns and loss adjustment activities in one or more counties. He also promotes good public relations and understanding of the FCIC program through personal contacts. Other duties include assigning work to fieldmen; screening applicants for fieldmen jobs; personally selling insurance in difficult areas; investigating controversial cases involving disputes over contracts, acreage reports, and premiums to correct misunderstanding; and investigating the ability of debtors to pay accounts.

The next level of responsibility in crop insurance fieldwork is that of the crop insurance supervisor, GS–9. Applicants who fill vacancies at this level usually have successfully carried

out the duties and training at the GS–7 level.

At all grade levels, employees are engaged in extensive fieldwork and travel in an assigned area which involves both driving an automobile and walking over farmland.

Employment Opportunities and Specifications

Applicants for these positions must meet the qualifications as specifically set forth in the Civil Service Commission Examination Announcement for crop insurance fieldman and crop insurance supervisor. Although college education is not a prerequisite for filling these positions, it is very desirable, since the Federal Crop Insurance Corporation hopes to obtain more applicants for crop insurance jobs with both practical farming experience and college education.

The GS–5 position requires 2½ years of general farm experience or education, or both, and ½ year of specialized experience. The GS–7 position requires 3 years of general experience or appropriate education, or both, and 1 year of specialized experience. Education may not be substituted for the specialized experience, which consists of experience in which the applicant applied sales or promotional ability in a farm situation.

The number of openings varies from time to time. Opportunities for advancement to higher grades are good for crop insurance fieldmen and supervisors who satisfactorily perform their duties.

Locations of Positions

Positions are organizationally established in the State offices listed below, but official duty stations are usually in smaller towns.

Montgomery, Ala.
Fresno, Calif.
Denver, Colo.
Springfield, Ill.
Indianapolis, Ind.
Des Moines, Iowa
Manhattan, Kans.
St. Paul, Minn.
Jackson, Miss.
Sedalia, Mo.
Lewistown, Mont.
Lincoln, Nebr.
Raleigh, N.C.
Fargo, N. Dak.
Columbus, Ohio
Stillwater, Okla.
Columbia, S.C.
Huron, S. Dak.
Nashville, Tenn.
College Station, Tex.
Kenbridge, Va.
Spokane, Wash.
Madison, Wis.

Employment Procedures

Application forms and additional information may be obtained from:

Personnel Branch
Federal Crop Insurance Corporation
U.S. Department of Agriculture
Washington, D.C., 20250

Forms can also be obtained from the Civil Service Commission Board of Examiners for the Federal Crop Insurance Corporation.

There is no written examination, but competitors are rated on the extent and quality of their experience and training relevant to the duties of the position. Such ratings will be based upon competitor's statements in their applications and any additional evidence secured. Applicants selected from the register of eligibles will be personally interviewed for potential employment.

Applicants should file Standard Form 57, Card Form 5001–ABC, and Standard Form 15 with the Board of Civil Service Examiners, Federal Crop Insurance Corporation, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Farm Management Supervisor

GS–5 and GS–7

■ At a time when rapidly increasing populations and steadily decreasing farm acreages make efficient farming a vital national objective, the farm management program offers qualified people an unusual opportunity to build a highly rewarding and useful career.

To capable and ambitious young men who are interested in assuming leadership in rural communities, the position of farm management supervisor in the Farmers Home Administration (FHA) offers a unique challenge. Farm management supervisors have the important responsibility of extending credit and supervisory aid to operators of family-type farms, and in helping them develop successful scientific farming programs.

However, in many rural areas, farm prosperity is not enough to assure total progress and prosperity. Adjustments in farming must be accompanied by growth in nonfarm enterprises and activities. With the recent broadening of FHA authority in the fields of rural housing and water system development, recreation, and land use adjustment, the agency is now able to provide capital for long-needed improvements in residential and farming communities. FHA also helps rural communities strengthen their economy by coordinating the rural area development services available from all USDA agencies. In addition, FHA offers technical assistance and loans to rural communities that plan wide-scale, rural renewal programs.

The Job

College graduates majoring in agriculture and knowledgeable of farm management are sought for appointment as farm management supervisors at the GS–5 and GS–7 levels. New employees assist the farm management supervisor in charge of the Agency's county offices and are expected to have sufficient knowledge of farm, livestock, or ranch management. They need to know how to apply the scientific and technical principles of closely related agricultural sciences in farm management and how to absorb training quickly so they can assume more responsible duties. The major duties of these positions are to advise on or perform professional work in the making and servicing of farm loans. This involves the application of a professional knowledge of the basic principles, concepts, and practices of farm management, farm credit, crop and livestock production, soil conservation, and water management to local conditions on a day-to-day basis.

Promotional Opportunities

There are promotional opportunities to farm management supervisory positions at the county, State, and Federal level through GS–16. Employees hired at GS–5 who perform satisfactorily may be promoted at the end of the training period to the GS–7 level.

In addition, advancement from the farm management supervisory positions is made by promotion to higher level management and administrative positions in the Farmers Home Administration's State and Federal offices.

Basic training is provided by a 6 months accelerated training program. On-the-job training goes on throughout the career of the employee.

Many specialized training schools are conducted to equip farm management supervisors for specialized tasks. Supervisors are given increased responsibility and corresponding advancement as rapidly as they demonstrate their ability.

Appointments are also made through a Student Trainee Program which encourages freshmen, sophomores, and juniors to apply for summer employment. This work supplements the academic training of the classroom. After a student trainee has graduated with a bachelor's degree he is promoted to the GS–5 level and continues his advancement under an accelerated promotion and training plan.

Experience, Education, and Related Requirements

For all GS grades, applicants must have successfully completed one of the following:

- A full 4-year course of study in an accredited college or university leading to a bachelor's or higher degree with major study in agriculture or a closely related field.
- At least 30 semester hours of coursework in the agricultural or related sciences, plus additional experience, or education of an appropriate nature to total 4 years of experience and education or 4 years of education.

Experience and Training Requirements

For GS–5, no additional experience or training is required.

For GS–7, at least 1 year of professional experience is required. Entrance at the GS–7 level is also possible if the applicant (1) completed 1 year of graduate study in an appropriate field, (2) maintained a "B" average or better in college, (3) graduated in the upper 25 percent of his class, or (4) achieved other specified scholastic recognition.

Farm or Ranch Background

The duties of these positions require a suitable farm or ranch background to enable the incumbents to work with farmers and ranchers effectively. Applicants must show that they have either lived or worked with farmers or ranchers long enough to be familiar with the work and with the general problems of farmers and ranchers. The extent and nature of this experience should be shown in sufficient detail on the application to allow the applicant to receive credit for this experience.

Applicants must show that they can give sound technical advice and guidance on farm, livestock, or ranch operations to help the operator improve himself economically. They also must show the personal traits and sound judgment necessary to meet and deal effectively with individuals, groups, and the general public on matters pertaining to the operations of a supervised farm credit program.

Supervisory or Administrative Ability

For some positions the ability to supervise or administer part, or all, of a farm credit program is required. For these positions, applicants must show that they have the ability to deal satisfactorily with technical workers and professional employees in the field of supervised agricultural credit, and that they have a sound knowledge of the methods and procedures used to supervise, administer, and manage this kind of professional work.

How To Apply

If you are interested in a professional career or a student trainee position with Farmers Home Administration you may obtain additional information and application forms by contacting:

Director
Personnel Division
Farmers Home Administration
U.S. Department of Agriculture
Washington, D.C., 20250

Operations Trainee

(Utilities)

GS–5 and GS–7

■ The Rural Electrification Administration (REA) helps bring electricity and telephone service to rural America through long-term loans and technical assistance. Engineering, management, and accounting services are important parts of this assistance.

In 28 years of operation, REA has financed the construction of more than 1,000 rural electric systems serving 5 million consumers in 46 States, the Virgin Islands, and Puerto Rico.

Since 1949 when the telephone loan program began, more than 800 REA-financed telephone companies and cooperatives have placed close to 3,400 modern dial exchanges in operation in rural areas to serve more than 1½ million subscribers.

Career Opportunities

Career opportunities are available for seniors majoring in business administration or accounting, or economics in combination with some business administration courses.

Each year a number of college graduates are selected by REA from the Civil Service Federal Service Entrance Examination for a 6-month training course in utility operation, management, accounting, loan appraisal, and related work. Most trainees are eventually assigned to field locations where considerable travel is required.

The training period generally includes a 1-month assignment with an REA field representative to observe firsthand the operations and management of a number of REA borrowers' systems. This on-the-job training is supplemented by conferences with REA specialists and lectures related to our program. If desired, graduate courses may be taken at one of the local universities.

Opportunities for Advancement

Appointments are made initially for duty in Washington, D.C. Applicants who receive an eligible rating for GS–5 are appointed at that grade, and under a training agreement with the Civil Service Commission are promoted to GS–7, after 6 months of satisfactory service. Applicants who receive an eligible rating for GS–7 in the examination are appointed at that grade.

Upon completion of 1 year's service in GS–7 assuming the employee demonstrates sufficient ability, the chances are good for promotion to GS–9.

Employees who demonstrate ability on the job will find ample opportunities for advancement to higher grades. REA follows a promotion-from-within policy insofar as commensurate with good management practices. All vacancies are advertised in a manner which assures each employee an opportunity to apply and to be considered by those responsible for making selections.

Work Assignments

After completion of the 6-month trainee program and upon demonstrating sufficient ability and aptitude, some employees are assigned to a field location in some area in the country, where considerable travel will be required. In this assignment, the employee, depending on his formal training and aptitude, works as an assistant to a

field representative or to a field accountant. These fieldmen handle REA's relations with borrowers in a specific area such as a state, a portion of two states, or two or more states, depending upon the number of borrowers in the particular area. When fully trained and experienced, most employees are assigned to the position of field representative or field accountant and receive progressive promotions. The exact geographic location cannot be predicted, but all field assignments are made as mutually satisfactory as is possible. Field representatives and accountants are classified in GS–12.

What Field Representatives Do

Field representatives advise and assist electric and telephone loan applicants and borrowers on all loan, management, and operating phases of the industry. Field accountants conduct preloan and postloan audits of telephone system records and advise and assist loan applicants and borrowers on accounting and record keeping.

Since REA has no branch or field offices, the representative operates from his place of residence, which serves as his official headquarters. Field employees receive, in addition to salary, per diem payment for expenses and travel allowances while away from headquarters.

There are some permanent assignments available in Washington, D.C., for positions as operations analyst, loan appraiser, and accountant. Operations analysts analyze the general business operations and management of loan applicants and borrowers to whom loans have already been made. Loan appraisers review and analyze applications for loans. This work involves general economic analysis, feasibility studies, management studies, and appraisals of facilities. REA accountants advise borrowers regarding the installation and operations of their accounting systems. They also examine accounts of loan applicants for use in appraising loan applications. Most of these positions are "line" or "operating" as distinguished from "staff."

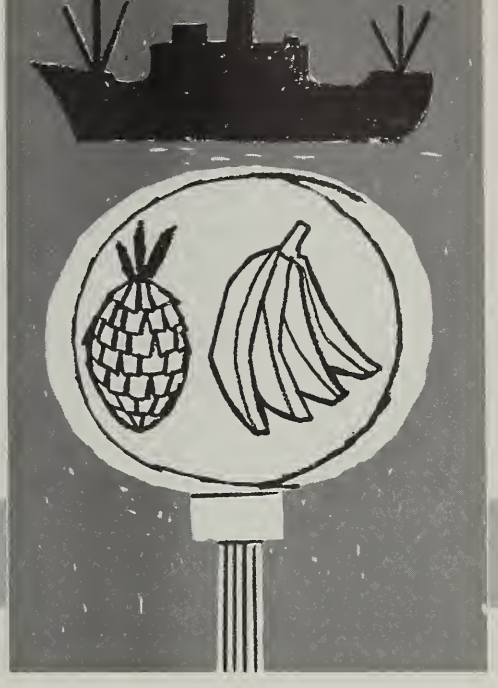
In selecting trainees, preference is given to applicants who demonstrate potential for meeting and dealing effectively with others and who are interested in ultimately accepting a field assignment outside of the Washington, D.C., area, as a field representative or an accountant. This particular work offers an excellent opportunity for practical application of formal education.

How To Apply

Application forms and additional information may be obtained from:

Director, Personnel Management Division
Rural Electrification Administration
U.S. Department of Agriculture
Washington, D.C., 20250

Plant Quarantine Inspector



GS–5 and GS–7

■ Plant quarantine inspectors protect American agriculture by enforcing Federal plant quarantine and related regulatory orders to prevent the introduction and spread of injurious foreign plant pests. They examine incoming carriers, cargoes, baggage, and mail for plant pests and for restricted or prohibited plant material. They inspect, treat, and otherwise safeguard importations of plant materials.

Detailed Duties

In the course of their daily assignments, plant quarantine inspectors intercept economically important insects or diseased plant materials.

- An inspector searched a cargo vessel at a New York pier and intercepted Khapra beetles in the ship's stores.
- An inspector discovered mangoes infected with fruit fly larvae in the handbag of a passenger about to board a plane leaving Hawaii.
- An inspector in New Orleans assisted an importer in referring three orchid plants to the inspection station for treatment prior to their release.
- An inspector at a Miami airport seized a lemon tree for destruction.

Plant quarantine inspectors are employed in important ports of entry on the coasts of the United States; several inland traffic centers; Hawaii, Puerto Rico, the Virgin Islands; and several foreign countries. They cooperate in the enforcement of laws and regulations of other Federal agencies, and particularly with U.S. Customs Service and U.S. Immigration Service officers.

Inspectors work a scheduled 40-hour week, which may include Sunday and night assignments. When Saturday and Sunday are scheduled workdays, it is the policy to schedule time-off on two consecutive weekdays. Occasional overtime and holiday work is required. Overtime is paid for work scheduled in addition to regular tours of duty. Premium pay is allowed for holiday and night assignments.

Inspectors are a uniformed service. Smart well-fitted uniforms are required while inspectors perform their duties. A cash allowance is made for the uniforms.

Physical fitness is important in plant quarantine inspector positions as much of the work is conducted out-of-doors and requires standing, stooping, and climbing.

Training

All new professional employees are appointed at New York City, where they participate in a 6-month training course. Usually, three courses are held each year; they begin in February, June, and October.

The training period includes approximately 13 weeks of academic training, demonstration laboratory work, and field visits. This is followed by rotational on-the-job training in the various operations of the Plant Quarantine Division. The training program is intended to minimize the time necessary for the new inspector to assume the full duties of his position.

The varied functional phases involved in efficient plant quarantine enforcement are stressed during this initial training period. Material cov-

ered includes orientation; public and interagency relations; applicable Federal laws, quarantines, rules and regulations; procedural and inspectional techniques; plant quarantine; entomology; plant pathology; and nematology.

Promotional Opportunities

Initial assignments to the Plant Quarantine Training School are at grades GS–5 and GS–7. Successful completion of the full 6-month training program by GS–5's results in their promotion to GS–7 at the time of their assignment to a duty station. GS–7 trainees who have demonstrated an ability to progress in the work during academic sessions may be assigned to duty stations after completing the 3-month academic phase of the training course. Inspectors able to assume the full responsibilities of the "journeyman" inspector may be promoted to GS–9 after completing 12 months as a GS–7.

Reassignments to other duty stations are made to broaden the inspector's experience and to benefit the service. There are numerous other opportunities for additional on-the-job training and experience to enable each inspector to develop his full potential and demonstrate his abilities.

The Plant Quarantine Division follows a promotion-from-within policy. Therefore, all division employees are in line for promotion to higher grades on the basis of the need of the division and demonstrated individual ability. Inspectors receiving initial appointments at GS–5 may be promoted to GS–9 after serving a total of 18 months (six months in the training level as a GS–5 plus 1 year as a GS–7 at a port of entry).

Employment Specifications

To qualify for GS–5 plant quarantine inspector requires:

- Completion of a 4-year course leading to a bachelor's degree in an accredited college or university with a major in the biological sciences, including at least 20 semester hours in one or a combination of: entomology, botany, plant pathology, nematology, mycology, invertebrate zoology, horticulture, or closely related subjects; OR
- Coursework totaling 30 semester hours in biology and related natural and physical sciences including the 20 hours of specified coursework, plus appropriate experience and education which, when combined with the required courses, will total 4 years of education and experience and give a technical knowledge comparable to that which would have been acquired through successful completion of a 4-year college course.

To qualify for GS–7 plant quarantine inspector requires:

- One full year of graduate study (30 semester hours) or all the requirements for a master's degree, with major study in an appropriate field where the study is related to plant quarantine inspection work; OR
- One year of appropriate professional experience; OR
- Completion of a bachelor's degree within the past 2 years and superior academic qualifications indicated by overall college average, average in college major, class standing or election to national honor societies.

Employment Procedures

If you are interested in these positions, you may apply under the examination for Plant Quarantine Inspectors. Copies of this announcement are available in first- and second-class post offices, college placement offices, and from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Soil Conservationist

GS–5 and GS–7

■ Conservationists in the Soil Conservation Service (SCS) have an opportunity to work in a rural environment with people—all kinds of people—in the national program of soil and water conservation. In this work the soil conservationist is able to bring to these people the latest scientific and technical developments in soil and water conservation. And he works in the great outdoors, at any of several thousand locations throughout the United States, Puerto Rico, and the Virgin Islands, doing tasks that are vital to the welfare of all Americans.

Duties

The work of the soil conservationist requires that he have technical knowledge in such fields as agronomy, range management, forestry, biology, engineering, soils, and farm management. With this background he is able to analyze conservation problems and recommend a planned program for the land.

A soil conservationist has the opportunity to obtain experience in all phases of soil and water conservation, or he may specialize in one field. Conservationists may be assigned to give technical help to a soil conservation district, usually the size of a county, that is organized under State law and run by the landowners themselves. He helps land owners and operators prepare conservation plans that provide for the best use and treatment of their land. He gives technical advice in installing the conservation measures that are called for in the plan, such as terracing; stripcropping; planting grass, trees, or wildlife food and cover; or establishing recreation facilities.

Groups of landowners frequently call on the soil conservationist to help apply measures to stabilize the soil and make the water run off the land slowly and safely within a watershed project. This work on the land, coupled with the small flood-retarding structures that SCS builds, is doing an effective job across the Nation in the reduction of flooding, and thus is saving millions of dollars. In addition to the reduction of flooding, these small flood-retarding structures provide water storage for irrigation, livestock, wildlife, recreation, and municipal uses.

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Opportunity for Advancement

New professional employees usually enter the Service at grades GS–5 and GS–7. Higher grade positions normally are filled by promoting someone already in the Service, through the SCS Career Development and Promotion Plan. Under this plan, employees have the opportunity to develop their technical and management skills so that they can be promoted to positions of greater responsibility. SCS provides intensive and specialized training under competent, experienced technical men, both on the job and in group-training centers.

Qualifications

Soil conservationists need a college degree with a major in soil conservation or a closely related agricultural science, such as agronomy or soils. They also need to have a farm background.

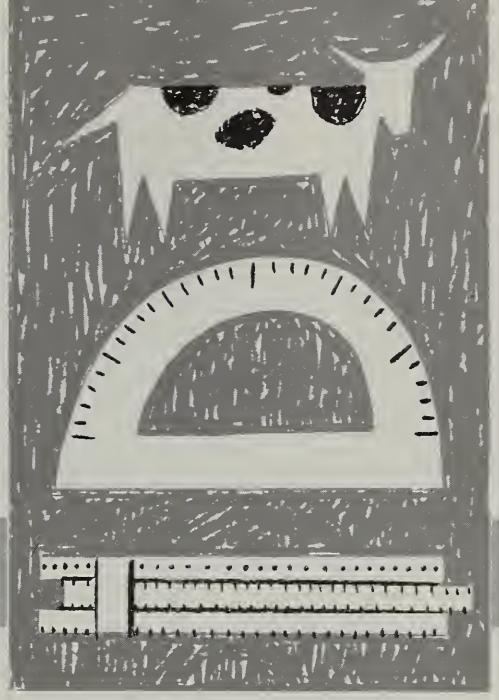
How To Apply

Ask your college placement officer or local postmaster for the soil conservationist examination announcement and an application blank. Send your application to the USDA Board of Civil Service Examiners, Soil Conservation Service, responsible for the area in which you wish to work.

U.S. Department of Agriculture

Range Conservationist

(FS)



GS–5 and GS–7

■ The Forest Service range conservationists are responsible for the management of 62 million acres of rangelands, grazed by domestic livestock, in the 154 National Forests and 18 National Grasslands in 43 States and Puerto Rico. These lands provide forage for approximately 3.7 million cattle and sheep belonging to some 20,000 ranch operators who have permits to graze on Forest Service lands.

The variability and complexity of the range resources as to kinds and quality of forage, ecological associations resulting from topography, aspect, climate, and soils, make the work of the range conservationist both interesting and challenging. He works closely with stockmen and representatives of livestock organizations, and other people. These contacts require that he have certain personal and professional qualities and abilities that will enable him to work successfully with people.

The Job of the Range Conservationist

A typical day might find the range conservationist in the field making a range allotment analysis of one of the approximately 11,000 National Forest grazing allotments, developing plans for rehabilitating depleted range, supervising construction of water developments and fences, developing a rest-rotation system of grazing, or making impact studies to determine the suitability, condition, and trend of the vegetation and soil, and to determine the grazing capacity of the various management units. Another day might find him tabulating sheep, tagging or marking cattle as they enter the National Forest, or meeting with a stockmen's association or individual stockmen to discuss management plans.

In managing the range resource to conserve the land and its plant cover and to provide forage for domestic animals, the range conservationist must have a general knowledge of the related resource fields, such as water, timber, wildlife, and recreation. Such knowledge helps him to provide optimum sustained yield and multiple use management of all the resources on the lands for which he is responsible.

Career Opportunities

At present, over 600 persons with training in range management are employed by the Forest Service. These are range conservationists or foresters. Each year the Forest Service hires around 50 college graduates who have a background in range management. Entrance levels are normally at the GS–5 or GS–7 grade, depending on an individual's qualifications and experience. Promotions are based on ability and merit with the initial promotion usually following satisfactory completion of a year's service. Range management careers in the Forest Service extend through the GS–15 level.

On-the-ground range management in the Forest Service is carried out at the ranger district level. The grazing allotment is the basic management unit. The range or forestry-range graduate may be employed initially as a range conservationist responsible for range allotment analysis, as a member of a district ranger's staff, or he may be employed on a special range improvement project.

Advancement

The lines of advancement may take one of several courses, depending on the individual's qualities and abilities and his personal desires. Advancement from a position in the ranger district may be into a ranger's position with broad administrative responsibilities, or it may be into a specialized range staff position in a supervisor's office. With broader experience the range men may qualify for various staff positions in the supervisor's office and the regional office. Such positions may lead to the position of forest supervisor, and to responsible positions on the regional forester's staff and in the Washington office. To the man who desires to specialize in range science, there are opportunities for advancement as a range specialist at all levels of administration from the ranger district to the Washington office. Assignments are designed to provide broad training in range and multiple use management, with opportunities for transfer between technical and administrative positions. Specialized training in the field of range management, to prepare employees for advancement, is provided through forest or regional training schools, attendance at meetings of professional organizations, or on-the-job training.

Qualifications

A bachelor's degree in range management or a closely related field, such as forestry, agronomy, or animal husbandry, which includes sufficient course work in range management, will qualify the graduate for a GS–5 range conservationist. Undergraduate study in range conservation includes such subjects as plant taxonomy and systematics, soils and geology, plant and range ecology, animal husbandry, and range management and conservation. Entrance at the GS–7 level is possible if the applicant attained a master's degree or maintained a "B" average or better in college or graduated in the upper 25 percent of his class, qualified for an accredited honor society or attained other specified scholastic levels. Graduate study, advanced degrees, or professional experience may qualify him for entrance at higher levels.

For more information on Forest Service careers in range management, write to the Regional Forester, U.S. Forest Service, at one of the following addresses:

Federal Building, Missoula, Mont., 59801
Federal Center, Building 85, Denver, Colo., 80225
Federal Building, 517 Gold Street SW., Albuquerque, N. Mex., 87101
Forest Service Building, Ogden, Utah., 84403
630 Sansome Street, San Francisco, Calif., 94111
729 Northeast Oregon Street, Portland, Oreg., 97208
Center Building, 6816 Market Street, Upper Darby, Pa., 19082
50 Seventh Street NE., Atlanta, Ga., 30323
710 North Sixth Street, Milwaukee, Wis., 53203
Fifth Street Office Building, Juneau, Alaska, 99801

U.S. Department of Agriculture

Range Conservationist
(SCS)

GS–5 and GS–7

■ Range conservationists in the Soil Conservation Service (SCS) enjoy the satisfaction of working with people—all kinds of people—in the national program of soil and water conservation. Certainly one of the most attractive and appealing aspects of this work is that it takes place in the great outdoors. At any of several hundred locations in the Western States, the range conservationist does work that is vital to the welfare of all Americans. Conservationists protect and improve our heritage of vast grasslands that "grow" livestock for the dinner table; provide habitat for wildlife; and open up new recreation areas to meet America's growing demands.

Duties

Range conservationists make range-site studies to determine what a rancher can expect of his range—in kinds of plants and amount of forage. They classify the natural plant cover on each range site into the proper range condition class that assures its most effective and correct use.

The conservationist discusses his findings with the rancher, usually a cooperator with a soil conservation district that is organized under State law and operated by the landowners themselves. He helps the landowner develop a range conservation plan.

The purpose of this plan is to keep the land in uses that will conserve soil and water; to improve eroded, wornout soils and increase their productivity; to improve forage; to provide proper application of irrigation water; and to increase the yield of all the products of the land—livestock, cultivated crops, hay, woodland, wildlife, and recreation sites.

Range conservationists give technical help in installing conservation measures that are called for in the range conservation plan, such as reseeding, noxious plant control, water development, proper grazing, and developing recreation facilities.

Work on rangeland may be part of the work plan of a small watershed project. Conservationists help to stabilize the soil upstream and to manage water so that it runs off the land slowly and safely. This work on the land and the small water-holding structures built by SCS help prevent flooding and siltation, and thus save millions of dollars. The structures also provide water storage for irrigation, livestock, wildlife, recreation, and even municipal uses.

Opportunity for Advancement

New professional employees usually enter the Service at grades GS–5 and GS–7. Higher grade positions normally are filled by promoting someone already in the Service, through the SCS Career Development and Promotion Plan. Under this plan employees have the opportunity to develop their professional and management skills so that they may accept positions of greater responsibility. SCS provides intensive and specialized training under competent, experienced technical men, both on the job and in group-training centers.

Qualifications

You will need a college degree with a major in range management or range conservation, and with additional course work in the animal sciences, plant sciences, and soils. Specific qualification requirements are stated in the examination announcement for this position.

How To Apply

Ask the college placement officer or local postmaster for the announcement of the examination appropriate to the range conservationist in the Soil Conservation Service, and for an application blank. Send the application form to the USDA Board of Civil Service Examiners, Soil Conservation Service, responsible for the area in which you wish to work.

Warehouse Examiner

(AMS)

GS–5

■ To the warehouse examiner goes the responsibility of safeguarding the abundant crops of our Nation which have been stored for future use. He guarantees that stored agricultural products worth billions of dollars are kept in good condition and will be delivered to their owners when needed.

Warehouse examiners are members of the Special Services Division in the Agricultural Marketing Service. They work as either cotton examiners or grain examiners, with headquarters in Little Rock, Atlanta, Indianapolis, Wichita, Omaha, Raleigh, Portland, or Memphis. A small administrative staff is maintained in Washington, D.C.

Duties

The warehouse examiner is an "expert" in auditing and taking inventory to find out what products should be on hand at a particular warehouse and what products are actually on hand.

He also is a diplomat who has the sound judgment and ability to meet and deal with warehouse owners and bank and commodity officials in obtaining information and in enforcing rules and regulations.

Those who like to travel, to deal with different people, and to meet new challenges in swift succession will find the work of a warehouse examiner interesting and rewarding.

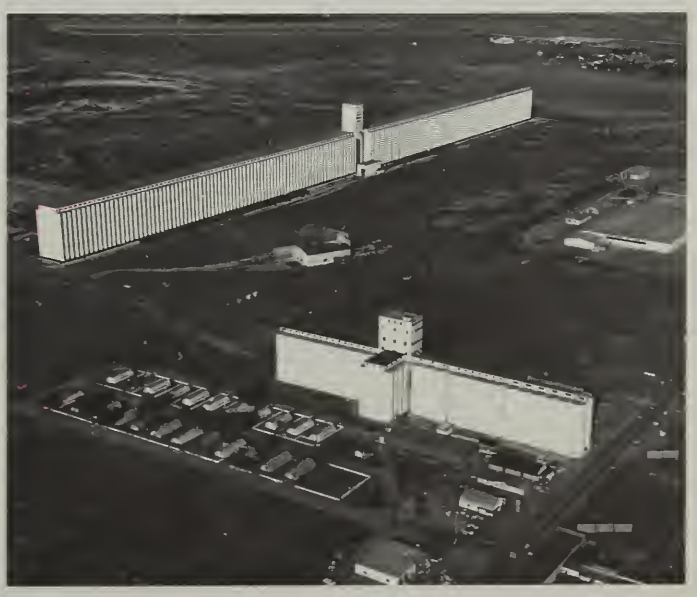
Training

Usually the warehouse examiner starts at the GS–5 level. After a 2-week period of training in auditing, inventory, and, in many cases, procedures used in grading grain at field headquarters, he is sent out on a job with an experienced examiner. When he returns, he prepares his report, spends another 1 or 2 weeks in coaching and training sessions, and then goes out on a new assignment.

Thus, most of his training is gained through on-the-job experience under supervision. Gradually he will be given more difficult assignments and less supervision.

Advancement

After a year he may be promoted to the GS–7 level where his training program on-the-job and in field headquarters continues. He may be promoted to GS–9 after a year as a GS–7.



Those who show supervisory and administrative talent may advance to GS–11 and GS–12 positions which correspond to officer-in-charge and assistant in a field office.

It is possible for outstanding individuals to be assigned to the Washington office in administrative positions of GS–13 and GS–14.

Employment Specification

You may qualify for the position on the basis of either appropriate experience or education or a combination of both. If you are qualifying on education alone, you must have a degree in general agriculture or in a specialized agricultural field or business administration. Applicants must pass the written test required under Announcement No. 249B for Warehouse Examiner.

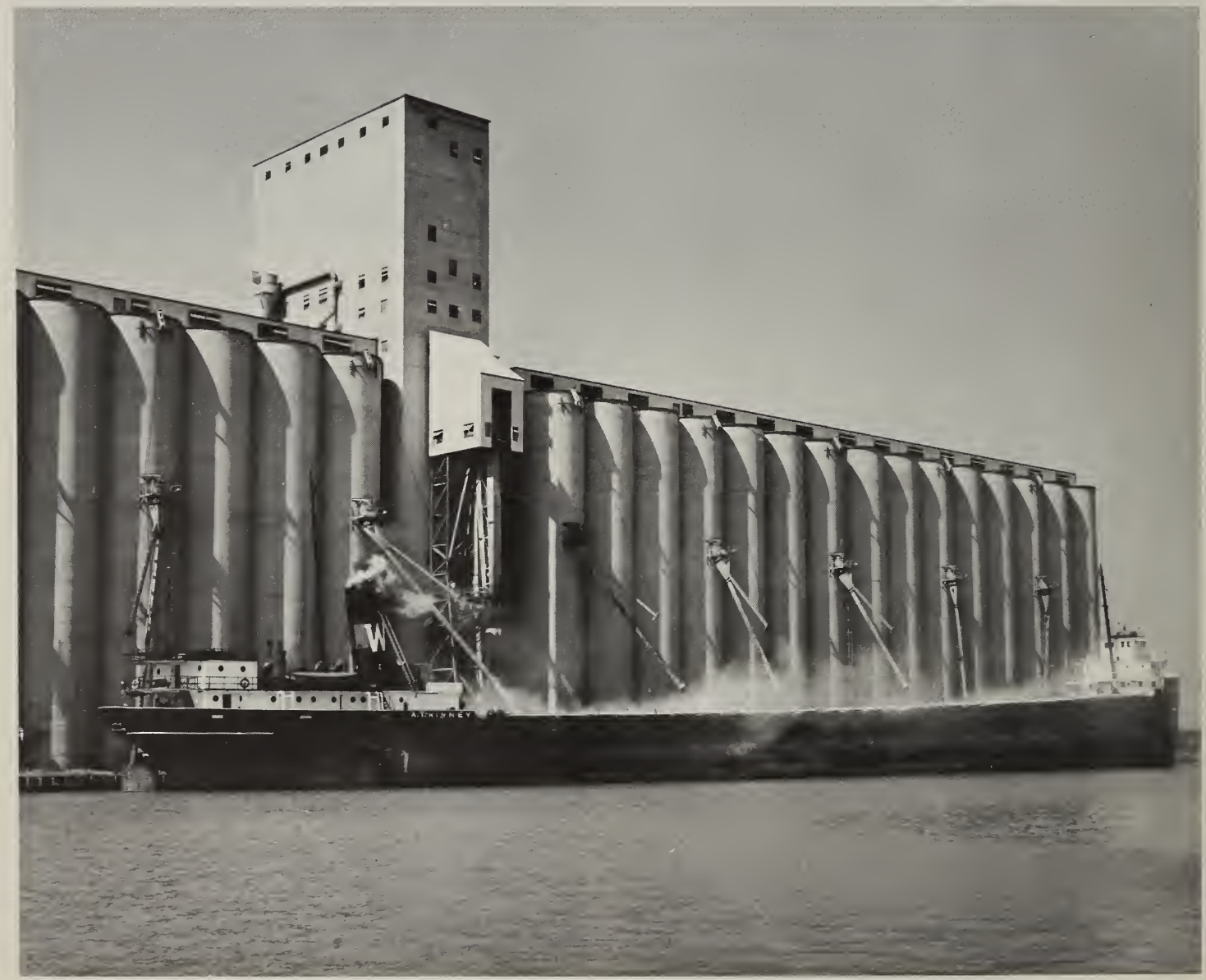
Employment Procedures

For further information, you may write to any one of the following offices nearest your home:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

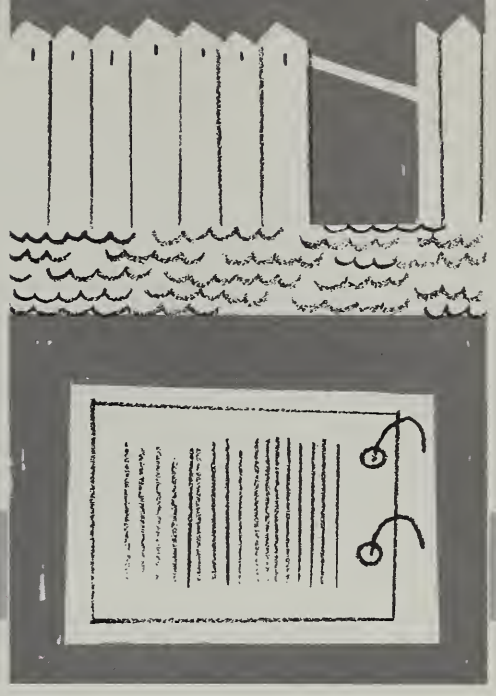
CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704



Warehouse Examiner

(ASCS)



GS–5 and GS–7

■ A warehouse examiner with the Agricultural Stabilization and Conservation Service (ASCS) is responsible for the protection of America's stored crops in Government custody. It is his duty to maintain a constant vigil so that the quality of these extremely valuable agricultural commodities is maintained.

When farm products go into the price support programs, either under nonrecourse loans or through Government purchase or takeover, they must be kept in safe storage until they can be moved into useful consumption. The larger the volume of commodities under support, the bigger the storage job becomes.

Storage of Agricultural Commodities

Most of the Government-owned price-support commodities are stored in commercial facilities. Congress has directed ASCS to utilize, to the maximum extent practicable, the usual and customary channels and facilities of trade and commerce in the warehousing of commodities.

The storage activities of ASCS fall into three general categories: (1) making maximum use of private facilities in the storage of Government-owned commodities; (2) providing Government facilities for storing Government-owned commodities, primarily grain, when private facilities are inadequate; and (3) helping farmers finance storage facilities on their own farms.

Storage charges for Government-owned or loan commodities in country, subterminal, or terminal facilities are determined by a uniform storage agreement entered into between the Government and the warehouseman. This is where the work of the warehouse examiner comes in.

The Job

ASCS warehouse examiners inspect agricultural commodity warehouses for compliance with the terms of Government storage contracts or agreements. When the Department enters into a contract with a warehouseman, the latter must request approval of his facilities. A warehouse examiner conducts an examination of the warehouse to insure that safe handling and storage will be provided for the products, that the warehouse is financially sound, and that the operators are competent. If the warehouse meets the requirements established by the Department, it is approved for use.

Subsequently, at periodic intervals, warehouses in which the products are handled or stored are examined to insure continued compliance with the regulations.

The warehouse examiner applies a knowledge of warehouse-examining methods and inspection techniques to determine the extent to which—

- Warehouse facilities and handling methods are suitable.
- Warehouse personnel are competent and reliable.
- Warehouse records adequately and correctly reflect stock inventories.
- The financial standing and business practices of warehouse operators comply with requirements.

Opportunity for Employment

Since ASCS administers a nationwide program and has many offices located outside the Washington, D.C., area, warehouse examiner positions are located in several places throughout the country. Four of the larger offices of ASCS are in Evanston, Ill.; Kansas City, Mo.; Minneapolis, Minn.; and New Orleans, La. Although warehouse examiners are headquartered in these locations, their actual work stations may be located in any one of the several States where agricultural commodities for which ASCS is responsible are maintained.

Training and Promotion

Based upon an individual's educational background or work experience, a warehouse examiner usually starts at the GS–5 (trainee) or GS–7 level. During the training period the warehouse examiner is given a variety of informative and interesting work assignments. At this level, the examiner receives instructions in laws, regulations, and policies governing the nature and scope of warehouse-examining activities. His work is reviewed by experienced warehouse examiners who give valuable pointers and hints on effective warehouse examining.

After a training period of approximately 6 months, warehouse examiners may be promoted to the GS–7 level. If the individual turns out to be an effective examiner at GS–7, promotion to GS–9 should come after approximately 1 year. Persons who gain the appropriate experience while warehouse examiners and demonstrate superior supervisory and administrative talent may advance to the GS–11 and GS–12 level. Assignments in Washington are available at higher grades.

Qualifications

Work contacts and the conduct of personal interviews are a regular part of the warehouse examiner's assignments. Therefore, he must have sound judgment and the ability to meet and deal satisfactorily with warehouse owners, operators, and employees, local bank and commodity officials, and other business references of the warehouseman either in obtaining needed information or in enforcing rules and regulations.

In addition, the examiner must be proficient at report writing as he must prepare a report of each examination. These reports, including actions, if any, to be taken by the warehouseman, form the basis for initial or continued approval of contracts and for other appropriate actions by management.

You can qualify for a position with ASCS if you have had at least 3 years experience which relates to the work of a warehouse examiner, or if you have a college degree in general agricultural or business administration.

How To Apply

For additional information concerning a career as a warehouse examiner with the Agricultural Stabilization and Conservation Service, you may write to:

Kansas City ASCS Management Field Office
ASCS–USDA
P.O. Box 205
Kansas City, Mo., 64141

Evanston ASCS Commodity Office
ASCS–USDA
2201 Howard Street
Evanston, Ill., 60202

Minneapolis ASCS Commodity Office
ASCS–USDA
6400 France Avenue, South
Minneapolis, Minn., 55400

New Orleans ASCS Commodity Office
ASCS–USDA
Wirth Building, 120 Marais Street
New Orleans, La., 70112

Section III

PART 4

CAREERS IN RESEARCH SCIENCE

Agronomist

GS–7, 9, 11, 12, 13, 14

■ Agronomists conduct research on field crops involving varieties, breeding and selection, crop management, rotations, and weed control.

Detailed Duties

Agronomists plan field experiments, execute the plans by planting and harvesting according to the experimental designs, make critical field observations by systematic recording of notes, and complete the experiment by reporting results.

In the field of forage grasses, turf grasses, and legumes, they conduct research leading to the development of superior grasses and legumes, improved methods of establishment, and management practices that increase yield and quality.

- Agronomists develop new and improved methods of breeding, breed improved varieties, and evaluate the quality of wheat and rye varieties under study.
- Agronomists conduct basic research on the chemical and physical factors responsible for wheat and rye quality differences in varieties and on improved procedures for detecting these differences.
- Agronomists study diseases of barley, including identification, prevention, control, host-pathogen relationships, genetics of pathogens, and varietal resistance.
- Agronomists study mutagenci agents to induce genetic variability in barley and determine laws and mode of action of the mutation process.
- Agronomists conduct physiological and biochemical studies on the nature of hardiness in winter barley.
- Agronomists conduct agronomic and physiologic investigations of the relation of environment, pesticides, cultural practices, chemicals, and fertilizers on the growth, development, yield, and quality of barley.

Active research programs are underway on alfalfa, clover, special-purpose legumes, and grass with relation to use in forage and range management. Studies are made of management practices for use on turf grasses, home lawns, military sites, airports, roadsides, recreational areas, and cemeteries. Varieties are subjected to regional performance tests and evaluated for winter-hardiness, adaptability, and response to fertilizer.

Research is conducted on cotton and cordage fiber breeding. Much of the work in genetics and plant breeding is carried on in cooperation with experiment stations in the cotton growing areas of the Southern and Western States.

Agronomists with the Agricultural Research Service study the fundamental principles of plant, soil, and related sciences as they apply to problems of field crop improvement. This includes research on forbs used for forage, hay, tobacco, rubber plants and shrubs, sugar plants, as well as the cereal and grains, legumes, grasses, and cotton fibers just mentioned.

Association with outstanding scientists broadens each scientist's research horizons and develops his individual capabilities. Contacts and collaboration with leaders in industry, with scholars from academic circles, and with scientists at widely known research centers stimulate professional growth of ARS scientists and enrich ARS research

programs. Inservice training through seminars, meetings, and other techniques is common.

Promotional Opportunities

Advancement in research is based on scientific accomplishment. In research activities, professional employees may aspire to careers in research administration or may pursue their careers in the planning and conducting of research itself, without assuming administrative duties. Opportunities for advancement to the highest grades are excellent in all programs for those who merit it on the basis of productivity, initiative, ability, accomplishments, and other relevant factors.

Employment Specifications

Basic requirements for agronomist positions are the completion of all requirements for a bachelor's degree in an accredited college or university with a major in agronomy or closely related subjects, including 10 semester hours in crop production or plant breeding.

Agronomists with master's degrees are usually appointed at GS–7 or GS–9; those with doctor's degrees are appointed at GS–11 or GS–12. Graduates meeting "quality" requirements may be eligible at the higher grade in each case.

At the GS–7 level the applicant must have at least 1 year of professional experience showing ability to do research work or 1 year of graduate study. However, applicants who have completed bachelor's degrees within the past two years may qualify for GS–7 if they have superior academic qualifications. This may be indicated by their overall college average, average in their college major, their class standing, or their election to national honor societies.

GS–9 requires at least 2 years of experience showing knowledge and understanding of research techniques and of the scientific principles applied in their use.

GS–11 requires at least 3 years of successful professional experience showing the ability to work independently and perform research work leading to publication in recognized scientific journals or similar media.

For positions at higher levels—GS–12, 13, and 14—progressively responsible experience is required. These positions require experience which shows the ability to conduct the most difficult research. They require outstanding competence in a scientific field and high ability in planning, organizing, directing, and interpreting difficult research projects.

Graduate study may be substituted for experience as follows:

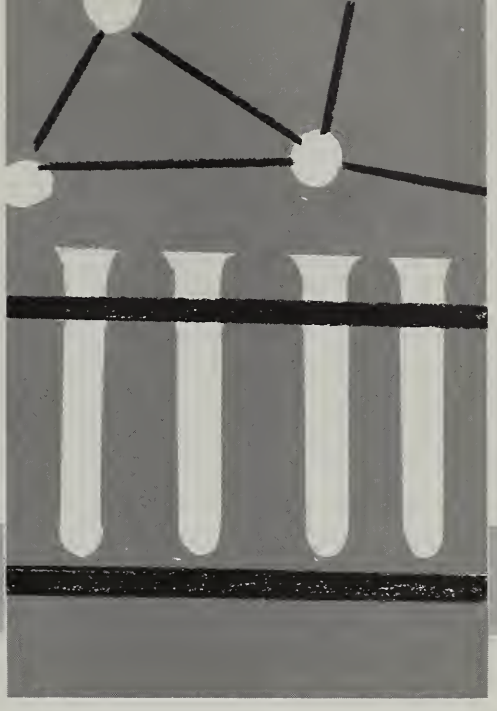
- One year of graduate study may be substituted for 1 year of professional experience and qualifies the applicant in full for GS–7.
- Two years of graduate study may be substituted for 2 years of professional experience and qualifies the applicant in full for GS–9.
- Completion of all requirements for the doctor's degree qualifies the applicant in full for GS–11.

Because of the complexity of modern research, ARS places special emphasis on the recruitment of well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If interested in these positions, you may apply under the examination announcement for Agricultural Research Scientists. Copies of this announcement are available at first- and second-class post offices, college placement offices, and from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Chemist



GS–5, 7, 9, 11, 12, 13, 14, 15

■ Chemists find new uses for farm products; develop new fungicides and pesticides; seek to protect crops and livestock against diseases and insects; and discover new ways to protect stored products against deterioration or infestation.

Detailed Duties

Some chemists study the composition of farm products. Others prepare new substances from compounds in farm products, so that new, useful products can be made from materials that would otherwise be wasted. Others study the metabolism of plants and animals for a better understanding of growth processes, leading to an improvement in production. Also, chemists help to find out how insecticides and fungicides work, so that still better ones can be developed.

Several illustrations of work being done by chemists follow:

- Chemists work as part of research teams studying forage crop management. They carry out chemical determinations, including analyses for nitrogen, chromogen, chromic-oxide, sugars, and other carbohydrate fractions on plant materials and fecal samples from pasture trials.
- Chemists plan and conduct laboratory, greenhouse, and controlled environment research on the movement, persistence, and inactivation of pesticides in soils.
- Chemists develop new procedures to isolate flavoroids of citrus fruits in quantities sufficient to establish their identities, chemical reactivities, and pharmacological activities.
- Chemists seek to improve stability of linolenic acid, a component of soybean oil, without altering the highly desirable characteristics of the oil.
- Chemists evaluate the components of wild and cultivated plants from all over the world to find pulp fibers and new oils, proteins, and plant germs.

Location of Jobs

Chemists take an active and responsible part in most research projects conducted by the Agricultural Research Service. Many chemists employed by this agency are located at the Beltsville Agricultural Research Center, Beltsville, Md. Divisions located at Beltsville include those concerned with farm research, nutrition and consumer use, and regulatory programs.

Excellent opportunities are available to chemists in the laboratories of USDA's four Utilization Research and Development Divisions.

The Eastern Utilization Research and Development Division is located at Wyndmoor, Pa. (near Philadelphia). Its laboratories are working on animal fats and proteins; dairy products, meat, hides, and leather; allergens; and plant products, including fruits and vegetables.

The SouthernUtilization Research and Development Division is located at New Orleans, La. Scientists in Southern's Oilseed Crops Laboratory seek to develop new or improved industrial oil products. The Food Crops Laboratory studies the chemical composition of citrus fruits and selected vegetables. The Cotton Finishes Labora-

tory conducts research designed to develop wash and wear cottons and cotton fibers that resist sunlight, heat, rot, mildew, weather, soil, water, oil, or flame.

The Northern Utilization Research and Development Division is located in Peoria, Ill. Scientists are conducting research in (1) the organic synthesis of new carbohydrate and lipid derivatives; (2) structure and analyses of natural products; (3) rheological properties of solutions of polysaccharides and proteins; (4) molecular properties of starches, proteins, and other natural polymers; (5) synthesis of new polymers from carbohydrates, lipids, amino-acids or peptides; (6) rearrangement of glycerides and separation of specific fatty acids and glycerol esters; and (7) kinetics and mechanism of selective catalytic hydrogenation of polyunsaturated fats.

The Western Utilization Research and Development Division is located at Albany, Calif. (San Francisco Bay area). Its scientists are engaged in research on the transformations of fruit and vegetable pigment contributing to the loss of color and taste in processed foods. Also, they isolate, identify, and characterize tannins, flavoroids, coumarins, and other plant constituents that cause unusual physiological responses in man or animals. Western's scientists study the polymerization, alkylation, esterification, and other protein reactions of wool and mohair fibers. Research is underway on derivatives of fatty acid constituents, with evaluation for possible industrial uses.

Scientists with the Agricultural Research Service have the opportunity to work in specially designed laboratories with the most modern equipment. Association with outstanding scientists broadens each scientist's research horizons and develops his individual capabilities.

Promotional Opportunities

Advancement in research is based on scientific accomplishment. Professional employees may aspire to careers in research administration or may pursue careers in the planning and conducting of research itself, without assuming administrative duties. Opportunities for advancement to the highest grades are excellent for those who merit it on the basis of initiative, ability, accomplishment, and other relevant factors.

Employment Specifications

Basically, applicants must have successfully completed a 4-year curriculum in an accredited college or university with a major in chemistry. The study must include at least 30 semester hours in analytical chemistry, both quantitative and qualitative, and either advanced inorganic chemistry, biochemistry, organic chemistry, or physical chemistry.

Chemists with bachelor's degrees usually are appointed at grade GS–5 or GS–7 and those with master's degrees at GS–7 or GS–9. Chemists with doctor's degrees are appointed at GS–11 or above. Graduates who can be classified as academically superior may qualify at the higher levels.

Because of the complexity of modern research, ARS places special emphasis on recruiting well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If you are interested in these positions, request information about examination and employment procedures from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Entomologist

(ARS)

GS–7, 9, 11, 12, 13, 14

■ Entomologists in the Agricultural Research Service conduct studies in insect biology, ecology, morphology, and taxonomy. They perform research on the abundance and distribution of insects; cultural, mechanical, biological, and chemical controls; plant resistance to insect attack; and insect transmission of plant diseases.

Detailed Duties

At the Beltsville Agricultural Research Center, entomologists study problems related to the protection of man, animals, and plants from the attacks of harmful insects and to the increased usefulness of beneficial insects. As only a small part of Federal research in entomology is conducted at the Center, they supervise the activities of about 100 entomology research laboratories located throughout the United States.

- Entomologists investigate the systematics of the larvae states of Lepidoptera to develop methods of distinguishing between many kinds of larvae and to show their interrelationships.
- Entomologists study the effect of light and photoperiod on insect growth, metamorphosis and dispause, and the chemistry and biochemistry of insect visual pigments, including the effect of nutrition on photo-response.
- Entomologists study the systematics of Homophera-Coccoides to develop methods for discrimination among species and their subdivisions, grouping of species to form higher taxa that reflect the phylogenetic relationships of the elements involved, and the interpretation of the significance of the accepted groupings.
- Entomologists study the biology, ecology, and control of insects and mites affecting vegetables and ornamental plants in the greenhouse and the relationship of insects to the spread of virus diseases of vegetables, berries, and ornamental plants.

Some of the most imaginative work in agriculture in recent years has been done by entomologists. Teamed with other scientists, they developed a sterile mating technique for reducing and eventually eliminating the screw-worm population of the Southeast. This technique involved mass rearing of flies in a laboratory, subjecting them to radioactive cobalt, and releasing them in huge quantities. Other means for sterilization are being tested and possible applications to the control of the housefly are being investigated.

Entomologists are proposing biological methods of control for other insects. These include the release of predator insects or specific diseases that will kill the pest, but otherwise be harmless. Milky spore disease has been found effective in controlling Japanese beetles. Methods that avoid the use of insecticides and eliminate possible residues make them highly desirable and attractive to producers.

The association with outstanding scientists broadens each scientist's research horizons and expands his individual capabilities. Contacts and collaboration with leaders in industry, scholars from academic circles, and scientists at widely

known research centers stimulate professional growth of ARS scientists and enrich ARS research programs. Inservice training through seminars, meetings, and other techniques is common.

Promotional Opportunities

Advancement in research is based on scientific accomplishment. Professional employees may aspire to careers in research administration or may pursue careers in the planning and conducting of research itself, without assuming administrative duties. Opportunities for advancement to the highest grades are excellent in all programs for those who merit it on the basis of productivity, initiative, ability, accomplishments, and other relevant factors.

Employment Specifications

Basically, applicants must have successfully completed a 4-year curriculum in an accredited college or university with a major in entomology or invertebrate zoology, with 12 semester hours of entomology.

At the GS–7 level the applicant must have at least 1 year of professional experience which shows ability to do research work or 1 year of graduate study. However, applicants who have completed bachelor's degrees within the past 2 years may qualify for GS–7 if they have superior academic qualifications. This may be indicated by their overall college average, average in their college major, their class standing, or their election to national honor societies.

GS–9 requires at least 2 years of experience showing a knowledge and understanding of research techniques and of the scientific principles applied in their use.

GS–11 requires at least 3 years of successful professional experience showing the ability to work independently and to perform research work leading to publication in recognized scientific journals or similar media.

For positions at higher levels—GS–12, 13, and 14—progressively responsible experience is required. These positions require experience which shows the ability to conduct the most difficult research. They require outstanding competence in a scientific field and high ability in planning, organizing, directing, and interpreting difficult research projects.

Graduate study may be substituted for experience, as follows:

- One year of graduate study may be substituted for 1 year of professional experience and will qualify the applicant in full for GS–7.
- Two years of graduate study may be substituted for 2 years of professional experience and will qualify the applicant in full for GS–9.
- Completion of all requirements for the doctor's degree will qualify the applicant in full for GS–11.

Entomologists with master's degrees are usually appointed at grades GS–7 or GS–9; those with doctor's degrees are appointed at grades GS–11 or GS–12. Graduates meeting "quality" requirements may be eligible at the higher grade in each case.

Because of the complexity of modern research, ARS places special emphasis on recruiting well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If you are interested in these positions, you may apply under the examination announcement for Agricultural Research Scientists. Copies of this announcement are available in first- and second-class post offices, college placement offices, and from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Entomologist

(Stored Products Insects)

GS–5, 7, 9, or 11

■ The work of an entomologist in agricultural marketing research may be pursued in a Government laboratory or under actual commercial conditions in the packing sheds, storage facilities, transportation vehicles, and markets. It may take him any place in the country where USDA's Agricultural Research Service (ARS) is helping to solve marketing problems.

Duties

The Market Quality Research Division has laboratories for stored product insect research at Richmond, Va.; Tifton and Savannah, Ga.; Manhattan, Kans.; Houston, Tex.; Watseka, Ill.; and Fresno, Calif. The nature of the problems being studied governs the composition of the research staff at each laboratory. For instance, chemists do research on pesticide residues that may result from treatments. The ARS entomologist frequently works as a member of a team representing several scientific disciplines.

The marketing system that brings farm and food products from producer to consumer in these United States is complex. Working within it, the entomologist studies the insects that damage grain, fibers, tobacco, dairy products, and dried fruit while they are in storage; while they are in transit by rail, truck, ship, or aircraft; and while they are being marketed in the cities. He determines which insects are important, identifies them, and learns where they come from and how they get into the stored product. Finally, he developes practical methods to eradicate the insects and to reduce the damage done by them.

As he pursues his research, he meets and works with members of the marketing industry, State universities, and State offices concerned with agricultural marketing. He often works closely with biological scientists who are concerned with maintaining the quality of farm products in marketing channels or with other USDA personnel who are concerned with grade standards or inspection requirements for farm products.

An important part of his work is to tell the marketing industry the results of his research. He does this through Marketing Research Reports and other series of publications published and distributed by USDA, and through articles in professional journals and technical magazines. His report, with the technical data that support his conclusions, must tell clearly and effectively how the marketing industry can use his results and what can be gained by using them. He also gets his information out through personal contacts, speeches, articles for the trade press, or other media used by USDA.

The entomologist is provided office and laboratory space and secretarial services as his work demands. The laboratories are equipped with standard entomological apparatus, such as microscopes, incubators, rearing chambers, fumigation and spray equipment, and facilities for making chemical analyses. He has special equipment for use in the tests he conducts in packing sheds, commercial storages, grain elevators, transportation vehicles, and markets.

Because his research is conducted both in the laboratories and under actual commercial conditions, the ARS entomologist is afforded the

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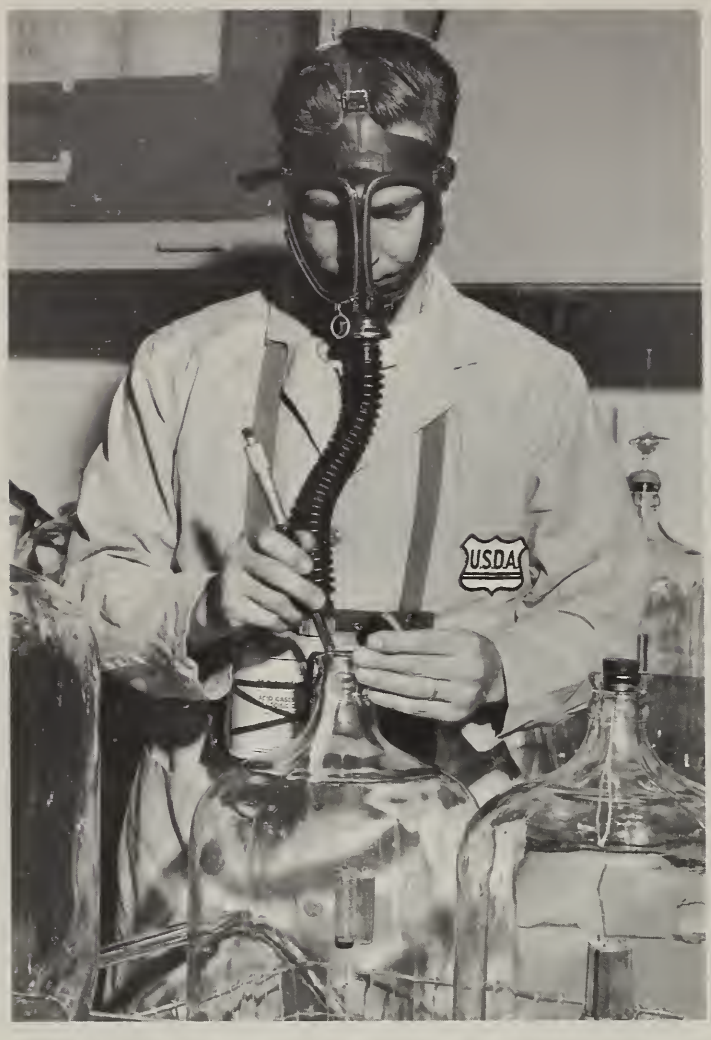


opportunity for basic studies and for the practical application of his findings to the solution of commercial problems. His work can take him to various parts of the United States and, sometimes, to overseas ports.

Advancement

Promotion opportunities are excellent for entomologists who demonstrate initiative and the ability to analyze the problems they encounter and to plan and conduct productive research.

They are promoted to higher grades as they demonstrate ability to assume greater responsibility and to conduct more complex research. A competent and productive entomologist who enters the Agricultural Research Service at the GS–5 or GS–7 level may expect to reach GS–12 or GS–13 in 7 to 10 years. Exceptionally capable entomologists may progress faster and reach a higher grade.

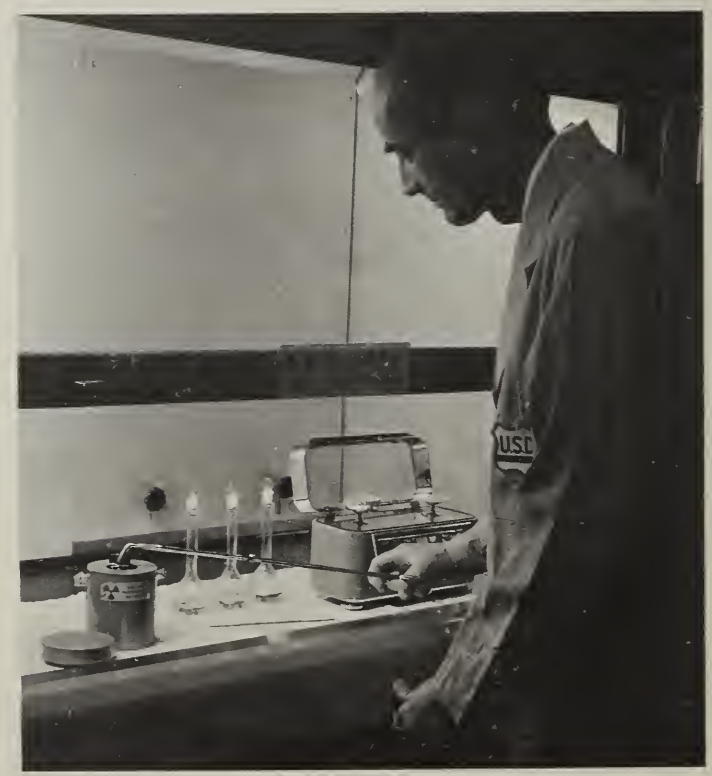
Employment Specifications

Entomologists with a bachelor's degree are usually appointed to grade GS–5 or GS–7, and those with a master's degree to GS–7 or GS–9. Entomologists having a doctor's degree are appointed to GS–11 or GS–12.

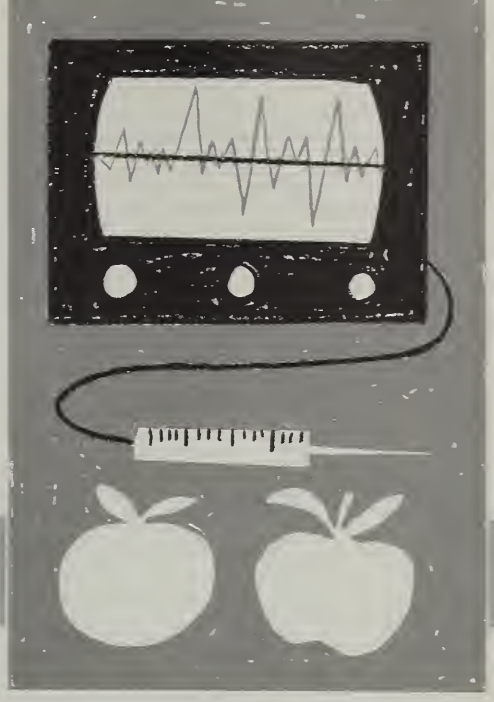
Prior to appointment you must receive a rating on an unassembled examination based on your education and experience as recorded on a Standard Form 57. Obtain further information from Civil Service Announcement No. 58–B, Agricultural Research Scientists. Prior to selection, a personal interview is required with a staff member in Washington, D.C., or one of the field stations previously listed.

Employment Procedures

For further information, you may write to the Personnel Division, Employment Section, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.



Food Technologist Marketing



GS–7, 9, 11, and 12

■ We have learned that we can pass a beam of ordinary light through apparently opaque objects. This can tell us many things; for example, the internal color of fruits and vegetables which may be related to maturity or ripeness and the presence of internal defects, such as water core in apples or hollow heart in potatoes.

Duties

The food technologist working with the Market Quality Research Division of USDA's Agricultural Research Service (ARS) plays an important role in exciting developments like this. His job is to take such basic research findings and develop the practical means of applying them.

Usually he works as part of a team which includes several scientific disciplines. At various times, he may be working with engineers, bacteriologists, chemists, plant physiologists, plant pathologists, or seed technicians.

One of these teams was responsible for developing the electronic blood-spot detector for eggs. This spectrophotometric device, by eliminating the necessity for individual handling of each egg, made mechanization feasible in the grading and packing of large lots of uniformly high-quality eggs.

Since then, ARS marketing researchers have put this same principle to work in developing other instruments that can "see" inside fruits and vegetables. Such work brings the American consumer some of the best, uniformly high-quality food available anywhere in the world and helps keep the cost down at the same time.

In general, the ARS food technologist is a researcher who applies science and engineering to the processing, packaging, distribution, preparation, and utilization of foods.

- He creates methods to measure and safeguard the wholesomeness and eating quality of the great variety of foods available today.
- He conducts experiments leading to basic improvements in food quality and devises techniques for predicting and extending the maximum storage periods for foods.
- He studies the effect of processing, packaging, and distribution on food quality, and how these processes may be improved to protect the quality.
- He publishes his findings in Government bulletins, professional journals, and trade papers so that the food industry will learn about them and put them into practical use. He may also spread this information through personal contacts and through talks at professional and trade association meetings and on radio and television.

ARS food technologists work in laboratories at Beltsville, Md., and Athens, Ga., where they also are provided office space and secretarial services. The laboratories are equipped with standard apparatus, such as microscopes, culture equipment, incubators, autoclaves, Warburgs, PH meters, potentiometers, colorimeters, centrifuges, gas analyzers, and taste-panel facilities. Also, there are walk-in storage rooms in which temperature and humidity can be controlled in simulated storage and transportation tests.

In addition, food technologists conduct re-

search under actual commercial conditions in packing sheds, storage facilities, transportation vehicles, and markets. Special equipment is provided for use in such facilities, including a trailer equipped as a mobile laboratory for bacteriological work. The food technologist often has an opportunity to travel to various parts of the United States, and sometimes to oversea ports.

Employment Specifications

To qualify for a position as a food technologist, you will need a degree in food technology, biology, physics, chemistry, or a closely related field, with at least 20 semester hours of food technology.

Advancement

Promotional opportunities are excellent for the food technologist who demonstrates initiative and the ability to analyze problems and to plan and conduct productive research. Food technologists with a master's degree may be appointed at grade GS–7 and occasionally at GS–9. Those with a doctor's degree may be appointed at GS–11 and occasionally at GS–12. Promotions to higher grades are made when the researchers demonstrate ability to assume greater responsibility and conduct more complex research. A highly competent and productive food technologist may expect to reach GS–12 and GS–13 within an average of 2 and 6 years, respectively. Exceptionally outstanding food technologists may progress faster and to an even higher grade.

Employment Procedures

For further information, you may write to the Personnel Division, Employment Section, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Forest Service Research

GS–5, 7, 9, 11, 12

■ The Forest Service is responsible for promoting conservation and proper utilization of the one-third of our country that is forest land. Seeking the unknowns and improvements of forestry with both basic and applied research is integral to this responsibility, and Forest Service research today employs men and women from more than 40 different scientific and other professional disciplines. Their primary goal is the discovery of new and better ways to protect, preserve, and fully utilize the country's forest resources.

Kinds of Research

Here are some of the features of Forest Service employment that research workers have found attractive:

- Advancement to higher grade jobs in either scientific research or research administration.
- Opportunity to pursue significant problem analyses.
- Encouragement to use initiative and ingenuity in individual research projects.
- Publication of results.
- Assistance with comprehensive studies related to advanced degrees.
- Association with recognized leaders in science and conservation.
- On-the-job training tailored to suit the needs of the individual.
- Affiliation with scientific professional societies.

The Forest Service is vitally concerned with providing a climate for serious advanced research in widely varying fields. About two-thirds of the 80 research units are located on college campuses where modern laboratories and extensive libraries are available. The college atmosphere and the association of employees with eminent scientists on campus help stimulate creative thinking and development and provide excellent opportunities for continuing academic work toward advanced degrees, and for postdoctoral work both here and abroad.

Today's Forest Service research scientist enjoys opportunities for rapid, intense, and diverse personal development. Research is underway in every section of the country, including Alaska, Hawaii, and Puerto Rico. In addition, Forest Service researchers provide advisory services to many foreign countries in the expanding field of international forestry.

Career opportunities are based primarily on the scientist's interests and aptitude. He is able to devote maximum time and attention to the development of his professional career because administrative personnel handle the business matters involved in research projects. Administrative responsibility is not a requirement for promotion. Most research is done on a project basis which stresses individual involvement, development, and advancement of each person as a member of a research team.

Training and work assignments are carefully planned to develop professional competence. The research scientist is encouraged and aided in continuing his professional associations. Promotional opportunities are excellent, being determined primarily by a man's ability and merit. Research career ladders extend through GS–17. Career

opportunities in forestry research center in the following main categories:

Forest products utilization research is conducted primarily at the Forest Products Laboratory at Madison, Wis. The major objective of this research is to explore the field of wood and woodbased materials. Scientists representing numerous disciplines are involved: forest products chemists, physicists, and technologists, botanists, entomologists, and physiologists, to name just a few. These scientists are aided by the finest equipment available. Forest Service scientists, using electron microscopy, recently have uncovered important new knowledge concerning wood structure knowledge that may substantially alter the course of future research in the field. Some researchers are engaged in investigations into the basic physical structure of wood elements as it relates to strength, shrinkage, movements of liquid, or pulp traits; others are examining changes in metals under stresses which affect cutting edges of woodworking machinery. Basic research is also going on in such areas as fire-retarding treatments for wood, and new concepts for making stronger paper products.

Forest recreation research is aimed at solving a wide variety of problems to help maintain and improve the forest recreation opportunity and resource and to help coordinate recreation use with other demands on forest resources. Recreation visits in the National Forests alone increased from 16 million in 1940 to 138 million in 1964.

Forest recreation research is aimed at maintaining and improving the recreation opportunity and evaluating its impact. Some of the work deals with the management of the soils, vegetation, and habitat at the recreation site. Here soil scientists, foresters, plant ecologists, and wildlife biologists study such problems as restoration of depleted areas and the development of practices to compensate for the impacts of heavy recreation use.

The Forest Service is also interested in helping to provide a pleasant, satisfying recreation experience for the many forest visitors. Just who are these visitors? What are their recreation needs and desires? What is their impact on the other forest resources and the economy of the area?

To answer these questions, the Forest Service needs graduates trained in economics and other social sciences. With their help and the efforts of experts in such disciplines as landscape architecture and engineering, the Forest Service can better make efficient recreation investments and management decisions and fulfill its obligation to the public.

Forest fire research in recent years has saved millions of dollars in natural resources that otherwise would have been lost in forest fires. However, there still remains a need for refinement of methods and development of new equipment and techniques. Research scientists in this field are primarily interested in fire prevention, behavior, and suppression.

Fire prevention becomes more important as

recreational use of forests multiplies. Sociologists on the reseach staff are interested in man-caused fires and their prevention. Recently, 10,000 California hunters were interviewed to find out how much they knew about fire prevention and to learn their personal backgrounds and traits. It is hoped that this kind of information will lead to more effective fire prevention.

Scientists in fire behavior research are interested in basic physical and chemical mechanics of the burning process. This type of research emphasizes training in physical sciences. Many of these researchers have graduate training in engineering, in meteorology, or in the physics and chemistry of combustion of cellulose fuels. Some studies in this field look into the relation of forest fire behavior to natural fuels, weather, and topography. Researchers conduct both laboratory and field tests—on the ground and in the air.

Fire suppression research is advancing the knowledge of the effective use of water and chemical retardants in fire fighting. One project involved study of the effect of viscosity on the ground pattern of water cascaded from aircraft. Results were the discovery of optimum amounts of thickening agents to yield desired patterns from drops made at different aircraft speeds and altitudes.

Watershed management research is concerned with the basic problems of the quality and quantity of water coming from forest lands and with the protection and utilization of forest soil and water resources. Watershed management research involves many scientific disciplines, including plant sciences, engineering, meteorology, soil science, geology, snow physics, and forestry. All forest land uses, such as timber production, grazing, forest recreation and reservoir developments, comprise the problem of watershed management.

Watershed research is concerned with that part of the hydrologic cycle that can be managed through manipulation of vegetation, soil, and water storage. How much of the rainfall enters the soil? Does this water become streamflow? Is it evaporated? Is it used by vegetation? Or does it become part of the ground water? How can the forest-land manager manipulate the forest cover to cause the water from a watershed to behave as he wants?

To answer these questions, the watershed scientist studies the relationships of soils and plants to water. He wants to learn the effects of climate, geology, and topography on erosion and water yield; and how factors involved can be combined to predict results of management practices on quality and quantity of water.

A bachelor's degree in forestry, with emphasis on soils and the basic sciences, provides a good background for watershed management research, if followed by specialized graduate training in one of the disciplines previously mentioned.

Engineering researchers work to improve the efficiency and performance of forest operations, such as harvesting, transportation, and other materials-handling jobs. They design systems in which efficiency and performance must meet the needs of forestry and forest land management for many years to come.

Engineers have to achieve radical improvement over present systems. New concepts and technological breakthroughs are needed in all engineering phases of forestry.

Research laboratories are established at colleges or universities, where close cooperation is maintained with engineering schools and laboratories. Many engineering disciplines collaborate in helping to solve complex problems. Civil, mechanical, industrial, and hydraulic engineers and other engineers work with mathematicians, physicists, and economists on a team approach to problem analysis and systems design.

One research study currently underway is on the use of water pipelines for transportation of forest products. Research is required on the hydraulic phenomena, the design criteria, and the materials-handling systems required to feed vast quantities of material in continuous flow. Alternative methods of pipeline feed, operation, and discharge are studied to determine optimum performance combinations.

Wildlife habitat researchers in the Forest Service determine how forest and range lands should be managed and improved to meet wildlife requirements and to support maximum game and fish populations in harmony with other uses. They develop wildlife management systems for the most efficient use of resources, and develop methods for revegetating depleted habitats. They also determine the effects of silvicultural and harvesting practices on wildlife habitat, the effects of wildlife on timber production, and the interrelations of livestock and wildlife in order to obtain optimum production of both. Research is conducted at numerous locations throughout the country since wildlife species, vegetation types, soil, topography, and climate vary widely.

Wildlife biology, plant ecology, and range conservation are the primary disciplines of scientists in wildlife habitat research; there are also opportunities for persons trained in forestry, plant physiology, agronomy, genetics, and fish biology.

One project now underway in Utah is studying the problem of restoring depleted big-game range to its potential productivity. A scientist on a project at an experiment station in Pennsylvania is trying to determine effects of timber-stand treatments on game-browse production and utilization and on timber growth and quality. Most of this research is performed cooperatively with State fish and wildlife conservation agencies.

Range management researchers work to improve the management of livestock forage resources on the nonagricultural lands. To do this, they must develop better systems of grazing management, learn how plants grow and why they grow where they do, and determine how much grazing the plants can withstand without depressing their growth and reproduction. They also determine how to replace poor forage plants with good forage plants by reseeding. And they learn the best ways to harmonize livestock grazing with forestry, recreation, watershed management, and wildlife management.

Range science, plant ecology, plant physiology and plant classification are the primary disciplines of scientists in range management research. Training in soils, chemistry, animal nutrition, forestry, and biometry is also useful.

One study underway in Colorado is attempting to learn the successional development of plant communities on wornout ranges. Knowledge from this study will give a better understanding of plant competition, determine what kinds of plants and plant communities protect watersheds best, and determine what plant communities provide the best grazing for livestock. Another project in the Missouri Ozarks is determining how plant communities can be changed by using fire to encourage better forage.

Research in **forest management, forest insects, forest disease,** and **forest economics** is also carried on by the Forest Service. Each of these fields uses a variety of the disciplines listed later. And, as in other kinds of research, each has as its primary goal the discovery of new and better ways to protect, preserve, and fully utilize the country's forest resources.

Qualifications

Men and women interested in Forest Service research should have good academic records. Many successful applicants have degrees above the bachelor's level.

Minimum qualification requirement for GS–5 is a bachelor's degree from an accredited college or university, with major study in the applicable field or a closely related field.

Many research positions begin at the GS–7 level. This means you must have graduate work or professional experience, have a grade "B" average in overall undergraduate college work or in your major. An applicant also may be eligible for GS–7 if he is a member of an accredited honor society or earned a master's degree in forestry, or graduated in the upper 25 percent of his class, or otherwise obtained specified scholastic achievements. Graduate degrees and appropriate experience can qualify you for grades up to GS–12.

You may be eligible for one of the following positions in Forest Service research if you have a degree in social, biological, or physical science, engineering, or mathematics:

Social Sciences:

Economist
Rural Sociologist

Biological Sciences:

Entomologist
Fishery Biologist
Geneticist
Insect Pathologist
Mycologist
Plant Taxonomist
Plant Pathologist
Research Forester
Soil Scientist
Wildlife Biologist

Engineering:

Chemical Engineer
Civil Engineer
Electronic Engineer
Hydraulic Engineer
Mechanical Engineer

Physical Sciences:

Chemist
Forest Products Technologist
Geologist
Meteorologist
Physicist

Mathematics:

Mathematical Statistician

For more information you can write to the Director, Forest and Range Experiment Station, U.S. Forest Service, in the following cities: Columbus, Ohio; Ogden, Utah; St. Paul, Minn.; Upper Darby, Pa.; Juneau, Alaska; Portland, Oreg.; Berkeley, Calif.; Fort Collins, Colo.; Asheville, N.C.; New Orleans, La.

You can also write to the Director, Forest Products Laboratory, Madison, Wis.; or the Institute of Tropical Forestry, Rio Piedras, Puerto Rico.

U.S. Department of Agriculture

Forest Geneticist

GS–5 and GS–7

■ The production of forest products is becoming increasingly important in the United States as our population increases and steady inroads are made into our supply of forest land. Improvement through genetics research will play a major role in meeting the timber needs of the future.

Disease and insect resistance, growth rate, and wood quality must be improved in timber trees. The Forest Service geneticist is concerned with these factors in trying to "better nature's best." He is the one who studies the scientific basis for these needed improvements. He also conducts original research on the principles of variation and heredity in forest trees.

Work of the Geneticist

To provide the basis for planning tree improvement programs and to find the best possible breeding stock, geneticists study the natural variation of important forest trees. Considerable differences in the form, growth rate, and susceptibility to disease and insect enemies can be found within a single tree species growing in different geographic areas. To find the most suitable race for a particular location requires experimental plantings of trees of many different seed origins in many areas and evaluation of apparent geographic strains.

Variation among individual trees growing in the same area is also common. From the outstanding superior specimens, breeding stock is found for genetic improvement. However, these trees may be superior because of their growing conditions rather than their genetic makeup. The forest geneticist must study their progeny under various conditions to determine whether the superiority is inherited or environmental.

Superior trees can be developed through carefully controlled breeding, in which the pollen of one superior tree is applied to the flowers of another. Faster growing, higher quality, healthier trees are thus produced by combining the best growing stock of natural stands.

Tree improvement research is a highly technical field that requires competence in the science of genetics plus a general knowledge of forestry, including forest entomology and pathology. The work is sometimes exacting and painstaking, and the rewards are great in terms of self-satisfaction that comes with the knowledge that the quality of forest production is being improved.

Often the crossbreeding of two different species produces a hybrid that has the desirable qualities of both parent species. Hybridization is a field of unlimited possibilities for discovering desirable crosses that fill the needs of a particular forest situation. Here the geneticist may become involved in such techniques as grafting, rooting, and air-layering, as well as in the delicate procedures of cross-pollination. When an outstanding new strain is produced experimentally, it is propagated and grown in seed orchards where commercial quantities of the superior seed are produced.

Sometimes species of trees in the same genus are incompatible to hybridization. The forest geneticist may be called in to determine the cause of the incompatibility. In so doing he may study the growth of the pollen tube or the development of the egg cells. Such research calls for specialization in cytology and cellular chemistry.

Job Opportunities

Most Forest Service geneticists conduct their research at one of three Institutes of Forest Genetics at Rhinelander, Wis.; Gulfport, Miss.; and Placerville, Calif. At these locations, the most modern scientific equipment, facilities, and libraries provide an atmosphere that encourages scientific inquiry into the basic problems of forest genetics. Here the geneticist works with leaders in his field and experts in other scientific disciplines.

Geneticists specializing in the applied research aspects of tree improvement are located at the other regional research stations and many field locations throughout the country.

Promotional Opportunities

Geneticists enter the Forest Service at GS-5, GS-7, or higher levels, depending upon their qualifications and experience. After 6 months to a year of satisfactory work, they are eligible for promotion to the next level; the 6-month promotion is possible under an approved individual training program. Steady advancement is possible on the basis of ability and merit. Forest service geneticists may progress to GS-14, and opportunities exist at the higher levels for both administrative and research scientists.

Training

From the time he enters on duty, the geneticist's training and work assignments are carefully planned to develop his professional competence. He is encouraged and aided in continuing his professional education. All scientific personnel in the Forest Service are eligible for comprehensive training programs which can lead to advanced degrees.

Qualification Requirements

To qualify for GS–5, you must have a bachelor's degree with a major in genetics or one of the fundamental biological sciences, including at least 6 semester hours in genetics and cytogenetics. An applicant also may be eligible for GS–7 if he has earned a master's degree in forestry, is a member of an accredited honor society, maintained a "B" average in college, graduated in the upper 25 percent of his class, or otherwise attained specified scholastic achievements. Graduate study, advanced degrees, or professional experience will qualify you for entrance at higher levels.

You can obtain more information on qualifications and application procedures by writing directly to one of the Forest Service Institutes of Forest Genetics previously mentioned. Information can also be obtained by contacting the Forest Service Experiment Station in one of the following cities: Columbus, Ohio; Ogden, Utah; St. Paul, Minn.; Upper Darby, Pa.; Juneau, Alaska; Portland, Oreg.; Berkeley, Calif.; Fort Collins, Colo.; Asheville, N.C.; and New Orleans, La.

Geneticist

GS–7, 9, 11, 12, 13, 14

■ Geneticists test and apply genetic principles to plants, animals, or poultry (1) to determine the mode of inheritance of genetic characters and (2) to develop more effective selection procedures for the improvement of plants, animals, or poultry and the products derived from them.

Detailed Duties

Geneticists with the Agricultural Research Service (ARS) examine the interaction of genetic characters, their environment, and the basic physiological and anatomical principles involved. Geneticists also evaluate the possible use of induced polyploidy and irradiation in crop improvement and investigate the cytogenetics and cytotaxonomy of plants.

- Plant geneticists study (1) the relative magnitude of additive, dominance, and epistatic variances; the development of genetic theory and the design of experiments which will permit estimation of the desired parameters; (2) the comparison of efficiencies of different breeding procedures; and (3) the collection and statistical analysis of experimental data relating to corn improvement.
- Plant geneticists study (1) the linkage relationship of genes for rust resistance to genes controlling other plant characteristics and (2) the development of techniques for transferring genes for resistance from related species or genera to commercial varieties of wheat.
- Poultry geneticists study (1) the immunogenetic response, the genetics of blood groups, and their relationship to productive traits in poultry, (2) and the development and evaluation of new methods and procedures for studying hereditary differences in poultry.
- Poultry geneticists determine (1) the chromosomal constitution of normal and parthenogenetic turkeys, chickens, and hybrids, and (2) the influence of environmental and physiological factors on the incidence of parthenogenesis.
- Animal geneticists work with the discovery and development of scientifically sound and economically practical measures for the prevention, control, and eradication of scrapie and other animal diseases.
- Animal geneticists do basic and applied research in the field of beef cattle breeding. This research involves (1) developing methods of measuring economically important traits in beef cattle; (2) comparing the effectiveness of different breeding systems, such as mass selection, inbreeding and line crossing, and crossbreeding, in effecting improvements in productivity; and (3) determining the mode of inheritance of qualitative genetic defects and devising genetic methods for most rapid elimination of such characteristics.

The association with outstanding scientists broadens each scientist's research horizons and expands his individual capabilities. Contacts and collaboration with leaders in industry, scholars from academic circles, and scientists at widely known research centers stimulate professional growth of ARS scientists and enrich ARS research programs. Inservice training through seminars, meetings, and other techniques is common.

Promotional Opportunities

Advancement in research is based on scientific accomplishment. Professional employees may aspire to careers in research administration or may pursue careers in the planning and conducting of research itself, without assuming administrative duties. Opportunities for advancement to the highest grades are excellent in all programs for those who merit it on the basis of productivity, initiative, ability, accomplishments, and other relevant factors.

Employment Specifications

Basic requirements for geneticist positions are the completion of all requirements for a bachelor's degree in an accredited college or university with a major in genetics or biological science, including 6 semester hours in genetics and cytogenetics.

Geneticists with master's degrees usually are appointed at GS–7 or GS–9; those with doctor's degrees are appointed at GS–11 or GS–12. Graduates meeting "quality" requirements may be eligible at the higher grade in each case.

At the GS–7 level the applicant must have at least 1 year of professional experience showing ability to do research work or 1 year of graduate study. However, applicants who have completed bachelor's degrees within the past 2 years may qualify for GS–7 if they have superior academic qualifications. This may be indicated by their overall college average, average in their college major, their class standing, or their election to national honor societies.

GS–9 requires at least 2 years of experience showing a knowledge and understanding of research techniques and of the scientific principles applied in their use.

GS–11 requires at least 3 years of successful professional experience showing the ability to work independently and to perform research work leading to publication in recognized scientific journals or similar media.

For positions at higher levels—GS–12, 13, and 14—progressively responsible experience is required. These positions require experience which shows the ability to conduct the most difficult research. They require outstanding competence in a scientific field and high ability in planning, organizing, directing, and interpreting difficult research projects.

Graduate study may be substituted for experience as follows:

- One year of graduate study may be substituted for 1 year of professional experience and qualifies the applicant in full for GS–7.
- Two years of graduate study may be substituted for 2 years of professional experience and qualifies the applicant in full for GS–9.
- Completion of all requirements for the doctor's degree qualifies the applicant in full for GS–11.

Because of the complexity of modern research, ARS places special emphasis on recruiting well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If you are interested in these positions, you may apply under the examination announcement for Agricultural Research Scientists. Copies of this announcement are available in first- and second-class post offices, college placement offices, and from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Horticulturist

GS–7, 9, 11, and 12

■ How can fruits, vegetables, and flowers be sent through all phases of the marketing cycle, while maintaining high quality, consumer appeal, and minimizing wastage? That's the challenge flung at the horticulturist in the Agricultural Research Service.

Duties

The horticulturist works first with these commodities immediately after they have been harvested. At this stage, he may seek the ideal harvest maturity by studying physical and chemical characteristics. He may search for handling methods that prevent physical damage to the product and for cleaning methods and containers that guarantee the consumer clean and sanitary products.

After post-harvest operations, the horticulturists follows the product through the packinghouse into storage. Here, he may help devise new washing, precooling, and packaging methods. He will also seek the temperature, humidity, and atmospheric composition that make an ideal storage environment.

Then the horticulturist will take his knowledge of the commodities to the shipping process where he works to prevent spoilage while products are transported by truck, train, ship, or plane. When the products arrive in the city, he switches emphasis to extending product life in the store and to making the commodity more attractive to the consumer.

He will not be working alone on these projects. Horticulturists in the Agricultural Research Service find an outgoing personality is an asset because they work with scientists from several fields—plant pathologists and physiologists, food technologists, and engineers.

For example the horticulturist may work on a team seeking a method of preventing spoilage of products. He combines his knowledge of product quality with the pathologist's knowledge of parasitic diseases caused by bacteria and fungi, and the physiologist's ability to recognize malfunctions of the plant cell during ripening and aging, together they find what causes a certain type of spoilage.

After he has completed his research, the horticulturist reports the results in technical papers published in Government publications and professional journals. He writes popular articles for Government and trade publications, and describes his research at professional and trade association meetings and over radio and television.

Horticultural research workers are provided office and laboratory space and secretarial service. The laboratories are equipped with standard apparatus—microscopes, respiration equipment, gas analyzers, and chromatographic equipment. Most of the laboratories have walk-in storage rooms where temperature and humidity are controlled to simulate storage and transportation conditions. Facilities for controlled atmosphere storage are usually available. Some work is also conducted in commercial packing sheds, storage houses, transportation vehicles, and markets. Special equipment is provided for these tests.

A horticulturist has the opportunity to travel to markets and facilities throughout the United

States and sometimes to oversea ports. He usually travels an average of 2 to 4 weeks a year, and is given the opportunity to attend professional society meetings of his discipline or closely related fields.

In the Agricultural Research Service, he will be a member of the Market Quality Research Division which conducts horticultural research at the following locations: Beltsville, Md.; New York, N.Y.; Presque Isle, Maine; Orlando, Fla.; Miami, Fla.; Raleigh, N.C.; Harlingen, Tex.; Chicago, Ill.; East Grand Forks, Minn.; Wenatchee, Wash.; Fresno, Calif.; and Pomona, Calif.

Advancement

Horticulturists with a master's degree are employed mainly at GS–7 and occasionally at GS–9, and those with a doctorate mainly at GS–11 and occasionally at GS–12. Researchers who show they can accept responsibility and do complex research are promoted to higher grades. A highly competent and productive researcher entering the Agricultural Research Service at GS–11 may expect to reach GS–12 and GS–13 within an average of 2 and 6 years, respectively. Exceptionally outstanding scientists may progress faster and to an even higher grade.

Employment Specifications

Approximately 70 percent of the research horticulturists are hired after they receive a doctor's degree, the remaining workers are hired after they have a master's degree, and they usually study part-time toward a doctorate.

A horticulturist should be well versed in the basic sciences, as well as in horticulture. He needs a background in plant physiology, plant biochemistry, organic chemistry, mathematics, and statistics. Engineering training is also helpful.

Employment Procedures

Further information can be obtained from the Personnel Division, Employment Section, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Microbiologist

GS–7, 9, 11, 12, 13, 14

■ Microbiologists perform or direct research on bacteria, rickettsia, viruses, and other organisms affecting agricultural organisms. With the Agricultural Research Service (ARS), microbiologists are members of an important research team.

Detailed Duties

Some microbiologists are concerned with the study of the origin, form, structure, life processes, diseases, and artificial introduction of epizootics in insects. Others investigate the importance of micro-organisms in the treatment of diseases and the part they play as agents in sanitation, decomposition, and fermentation. Other microbiologists are working on projects related to the function of micro-organisms in the making of such products as vitamins, antibiotics, amino acids, organic acids, enzymes, alcohol, feed supplements, and polymers. Still others study the ways in which various micro-organisms affect soil productivity or animal nutrition.

Several illustrations of work being done by microbiologists follow:

- Microbiologists in a large fermentation laboratory maintain a culture collection of approximately 9,000 species and strains of bacteria, molds, and yeasts. These are used to develop new industrial processes and products to achieve wider utilization of agricultural products.
- Microbiologists working with the culture collection furnish 2,000 cultures to industrial companies and research laboratories for use in (1) converting agricultural commodities into commercial products including specialized foods and feeds, (2) controlling the harvesting and marketing of food materials, and (3) conducting scientific research.
- Microbiologists collect agriculturally important molds, investigate different methods of storing them, isolate and identify new species, and prepare reports on their studies.
- Microbiologists screen and test large numbers of micro-organisms in search for antibiotics to control plant disease.
- Microbiologists assigned to the bovine anaplasmosis program prepare infected blood and plasm specimens for electron microscopy; they quantitatively evaluate aliquots of these materials by conventional, phase-contrast, and fluorescent microscopic procedures so that the results of electron microscopy can be compared with the results of other microscopic methods.
- Microbiologists study organic fatty acid and nitrogenous excretory products of rumen bacteria and protozoa.

Association with outstanding scientists broadens each scientist's research horizons and develops his individual capabilities. Contacts and collaboration with leaders in industry, with scholars from academic circles, and with scientists at widely known research centers stimulate professional growth of ARS scientists and enrich ARS research programs. In-service training through seminars, meetings, and other techniques is common.

Promotional Opportunities

Advancement in research is based on scientific

accomplishment. In research activities, professional employees may aspire to careers in research administration or may pursue careers in the planning and conducting of research itself, without assuming administrative duties. Opportunities for advancement to the highest grades are excellent in all program activities for those who merit it on the basis of productivity, initiative, ability, accomplishments, and other relevant factors.

Employment Specifications

Basic requirements for microbiologist positions are the completion of all requirements for a bachelor's degree in an accredited college or university with a major in the physical or biological sciences, including 20 semester hours in bacteriology or microbiology.

At the GS–7 level the applicant must have at least 1 year of professional experience showing ability to do research work or 1 year of graduate study. However, applicants who have completed bachelor's degrees within the past 2 years may qualify for GS–7 if they have superior academic qualifications. This may be indicated by their overall college average, average in their college major, their class standing, or their election to national honor societies.

GS–9 requires at least 2 years of experience showing a knowledge and understanding of research techniques and of the scientific principles applied in their use.

GS–11 requires at least 3 years of successful professional experience showing the ability to work independently and to perform research work leading to publication in recognized scientific journals or similar media.

For positions at higher levels—GS–12, 13, and 14—progressively responsible experience is required. These positions require experience which shows the ability to conduct the most difficult research. They require outstanding competence in a scientific field and high ability in planning, organizing, directing, and interpreting difficult research projects.

Graduate study may be substituted for experience as follows:

- One year of graduate study may be substituted for 1 year of professional experience and qualifies the applicant in full for GS–7.
- Two years of graduate study may be substituted for 2 years of professional experience and qualifies the applicant in full for GS–9.
- Completion of all requirements for the doctor's degree qualifies the applicant in full for GS–11.

Microbiologists with master's degrees usually are appointed at GS–7 or GS–9; those with doctor's degrees are appointed at GS–11 or GS–12. Graduates meeting "quality" requirements may be eligible at the higher grades in each case.

Because of the complexity of modern research, ARS places special emphasis on the recruitment of well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If you are interested in these positions, request information about examination and employment procedures from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Plant Pathologist

GS–7, 9, 11, 12, 13, 14

■ Plant pathologists conduct research on the cause and control of the diseases attacking crop plants, including those caused by fungi, bacteria, viruses, and adverse physiological conditions.

Detailed Duties

Plant pathologists work closely with plant breeders and others in developing disease-resistant species. They conduct research related to producing (1) artificial epiphytotics of various diseases; (2) methods for prevention and control of diseases; (3) the life cycles of the disease-producing organisms; (4) the host-parasite relationships and the effects of disease on the culture, harvest, transportation, and storage of plants or plant products. As illustrations:

- Plant pathologists isolate and identify soil micro-organisms which alter pesticides.
- Plant pathologists study the absorption, storage, and release of pesticides by soil organisms.
- Plant pathologists cooperate with plant physiologists on studies of the relationship between chemical structure of pesticides and microbiological inactivations.
- Plant pathologists study the interrelationships of environment, microbial activity, and pesticide inactivation.
- Plant pathologists study the comparative resistances of cereal varieties to the disease under study.
- Plant pathologists working with cereal grains collaborate with agronomists and geneticists in genetic studies of wheat and its relatives to locate and transfer resistance to commercial varieties.
- Plant pathologists conduct cytological studies of the basic effects of antibiotics and other chemicals which have an inhibitor effect upon the mildew pathogen.

At the Beltsville Research Center, world collections of seeds are assembled, evaluated, and maintained to discover useful germ plasm and material for use in the development of evolutionary principles. Seeds are distributed throughout the country for use in breeding improved varieties.

The mushroom research program is known internationally. Mushroom research includes methods of controlling diseases, improvement of natural and artificial composts, and basic studies on genetics and strain improvement.

Two hundred or more imported varieties of sugarcane are grown annually under quarantine to avoid introduction of foreign diseases and pests. After quarantine, the valuable germ plasm is transferred to sugarcane breeding stations in the United States and other countries.

New selections of sweet sorghum are evaluated for resistance to bacterial stripe disease.

Sugarbeet research is conducted primarily to establish basic breeding material which is resistant to leaf spot and black root.

The association with outstanding scientists broadens each scientist's research horizons and expands his individual capabilities. Contacts and collaboration with leaders in industry, scholars from academic circles, and scientists at widely known research centers stimulate professional growth of ARS scientists and enrich ARS pro-

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grams. Inservice training through seminars, meetings, and other techniques is common.

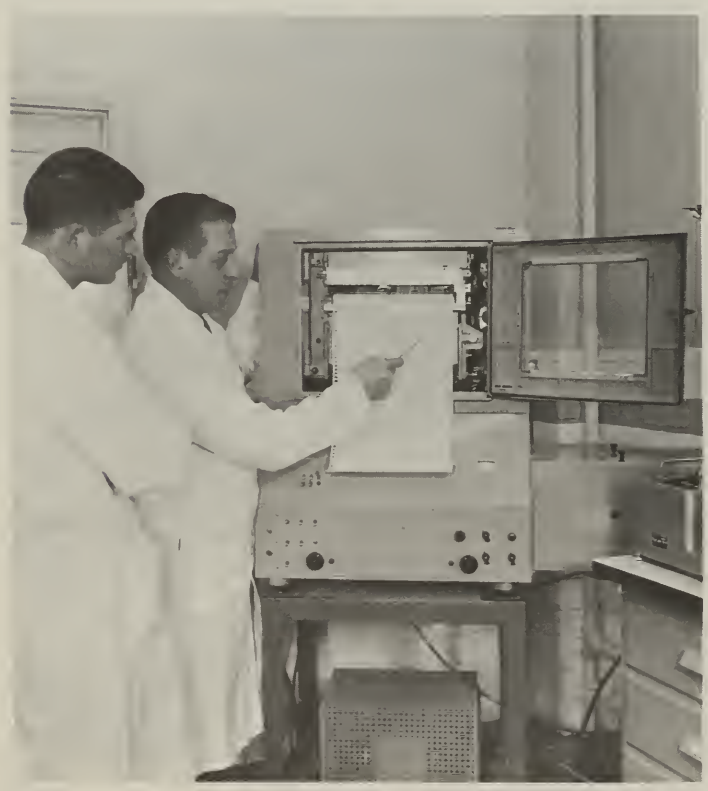
Promotional Opportunities

Advancement in research is based on scientific accomplishment. In research activities, professional employees may aspire to careers in research administration or may pursue careers in the planning and conducting of research itself without assuming administrative duties. Opportunities for advancement to the highest grades are excellent for those who merit it on the basis of productivity, initiative, ability, accomplishments, and other relevant factors.

Employment Specifications

Basically, applicants must have successfully completed a 4-year curriculum in an accredited college or university with a major in plant pathology or related plant sciences, including at least 10 semester hours in plant pathology.

At the GS–7 level the applicant must have at least 1 year of professional experience which shows his ability to do research work or 1 year of graduate study. However, applicants who have completed bachelor's degrees within the past 2 years may qualify for GS–7 if they have superior academic qualifications. This may be indicated by their overall college average, average in their college major, their class standing, or their election to national honor societies.



GS–9 requires at least 2 years of experience showing knowledge and understanding of research techniques and of the scientific principles applied in their use.

GS–11 requires at least 3 years of successful professional experience showing the ability to work independently and to perform research work leading to publication in recognized scientific journals or similar media.

For positions at higher levels—GS–12, 13, and 14—progressively responsible experience is required. These positions require experience which shows the ability to conduct the most difficult research. They require outstanding competence in a scientific field and high ability in planning, organizing, directing, and interpreting difficult research projects.

Graduate study may be substituted for experience as follows:

- One year of graduate study may be substituted for 1 year of professional experience and qualifies the applicant in full for GS–7.
- Two years of graduate study may be substituted for 2 years of professional experience and qualifies the applicant in full for GS–9.
- Completion of all requirements for the doctor's degree qualifies the applicant in full for GS–11.

Plant pathologists with master's degrees are usually appointed at GS–7 or GS–9; those with doctor's degrees are appointed at GS–11 or GS–12. Graduates meeting "quality" requirements may be eligible at the higher grades in each case.

Because of the complexity of modern research, ARS places special emphasis on the recruitment of well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If you are interested in plant pathologist positions, you may apply under the examination announcement for Agricultural Research Scientists. Copies of this announcement are available in first- and second-class post offices, college placement offices, and from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Plant Pathologist Marketing

GS–7, 9, 11, and 12

■ Some of the most important agricultural research has moved from the farm to the commercial channels where food is transported and marketed. The USDA plant pathologist plays a key role in this research. Consumers, farmers, and everyone else in the Nation's marketing channels depend upon his past, present, and future work to ensure the wholesome, flavorful, and nutritious qualities of food with high sales appeal.

Many plant diseases that attack fruits, vegetables, grain, and seeds in market channels have been conquered through the work of plant pathologists in the Market Quality Research Division of USDA's Agricultural Research Service. Many more diseases have been only partly conquered, and others require much more research in order to develop satisfactory controls. The plant pathologist of the future has much to contribute to better marketing of food products, both in domestic markets and in the increasingly important oversea markets.

Duties

The plant pathologist studies organisms responsible for spoilage of fresh fruits and vegetables, and he determines which are important in the Nation's marketing channels, and develops practical methods of controlling the organisms. His work covers every important kind of fruit, vegetable, grain and seed; he works in laboratories in different production and marketing centers specializing in certain products.

The Market Quality Research Division has 13 laboratories. They are located in California, Florida, Illinois, Maine, Maryland, Minnesota, New York, North Carolina, Texas, and Washington. The plant pathologist's work takes him from these laboratories into every mode of transportation used for agricultural products, and into the warehouses, retail stores, and other facilities used in processing and handling food from the time it leaves the farm until it reaches the consumer.

In addition to planning and conducting research, the plant pathologist disseminates information on his research to the public, to agricultural organizations, and to scientific groups. He presents his material in publications issued by the Government and by scientific organizations, in radio and television broadcasts, and at meetings he attends.

The plant pathologist's work in the laboratory and in the field is often conducted as part of a team, including plant physiologists, food technologists, and engineers. His work includes both basic studies that will have practical application at an unknown future time and those that have practical application to immediate commercial problems.

Equipment for both field and laboratory research is modern and enables the researcher to carry out a wide range of studies under either commercial or laboratory conditions. Atomic-energy sources are one example of the tools that may be widely used in the future, and that are presently being used on a limited scale to protect food products from spoilage by plant diseases.

The introduction of new handling, storing, and shipping practices, such as vacuum cooling, hydrocooling, controlled atmosphere storage, and mechanical harvesting, creates entirely new areas of research; much work is needed by plant patholo-

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gists to study the effects of plant diseases under these and other conditions of modern marketing.

Advancement

Promotional opportunities are excellent for the plant pathologist who demonstrates initiative and the ability to analyze problems and to plan and conduct productive research. A few plant pathologists with a master's degree are appointed in grade GS–7 and occasionally at GS–9. Those with a doctor's degree are appointed in GS–11 and occasionally at GS–12. Promotions to higher grades are made when the research worker demonstrates ability to assume greater responsibility and conduct more complex research. A highly competent and productive plant pathologist entering the Agricultural Research Service at GS–11 may expect to reach GS–12 and GS–13 within an average of 2 and 6 years, respectively. Exceptionally outstanding scientists may progress faster and to an even higher grade.

Employment Specifications

Approximately 90 percent of the research plant pathologists are hired after they receive a doctor's degree. They need specialized background in post-harvest problems, as well as a well-grounded background in the basic sciences.

Employment Procedures

For further information write to the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Plant Physiologist Marketing

GS–7, 9, 11, and 12

■ What causes fruit to ripen? Why does it ripen? Why does chilling injure sweetpotatoes? What causes tissues to age? Why aren't they self-regenerating?

Plant physiologists working with the Market Quality Research Division of USDA's Agricultural Research Service seek answers to questions like these.

Duties

Plant physiologists probe into the very nature of living tissue. Perhaps they will be the ones to unlock the secret of cell life—to the benefit of all mankind.

But their work has very practical aspects here and now. Some of it is already saving millions of dollars each year as methods they developed are put into use (1) to prolong the market life of fruits and vegetables and (2) to reduce the after-harvest spoilage that still results in a great deal of waste fruits and vegetables.

Plant physiologists see great potential for slowing down too-rapid post-harvest development of fruits and vegetables. Some recent work, for instance, shows that rosebuds held in an ethylene-oxide atmosphere for a short period will retain their youthful good looks for days longer than untreated buds. Now physiologists are working on the application of this principle to other commodities.

Study of how atmosphere—its temperature, relative humidity, and composition—affects shelf life and market quality of fruits and vegetables is one aspect of ARS plant physiologists' work. Another is the study of the effects of post-harvest treatments; that is, the relationships of growth regulators and stimulants to the market quality of such products as strawberries.

Basically, plant physiologists study the physiological processes that occur in fruits, vegetables, and grain after they are harvested; while they are in storage; while they are moving by rail, trucks, ships, or aircraft; and while they are being marketed in the cities. And they develop practical methods to promote the desirable physiological changes and to retard the undesirable changes.

Frequently, they work as part of a team representing several scientific disciplines. Depending on where they are working and on the problems, they may team up with horticulturalists, plant pathologists, engineers, food technologists, or seed technologists.

ARS plant physiologists work in laboratories located in: Beltsville, Md.; New York, N.Y.; Presque Isle, Maine; Orlando, Fla.; Miami, Fla.; Raleigh, N.C.; College Station, Tex.; Harlingen, Tex.; Chicago, Ill.; East Grand Forks, Minn.; Wenatchee, Wash.; Fresno, Calif.; and Pomona, Calif.

These laboratories, in which the physiologist is provided office space and secretarial services, are equipped with standard apparatus, such as microscopes, incubators, Warburgs, autoclaves, colorimeters, PH meters, gas analyzers, centrifuges, and chromatographic equipment. In addition, most have walk-in storage rooms in which temperature and humidity can be controlled for simulated storage and transportation tests.

Special equipment is provided for research conducted under actual commercial conditions in

packing sheds, storage facilities, transport vehicles, and markets. Physiologists often have an opportunity to conduct studies in various parts of the United States, and sometimes in overseas ports.

An important part of the physiologist's job is getting his research results to be public, so that they can be put to practical use. This he does through publishing his results in USDA bulletins, in professional journals, and in trade papers. He also spreads information through personal contacts, in talks before professional and trade groups, and by participation in radio and television broadcasts.

Advancement

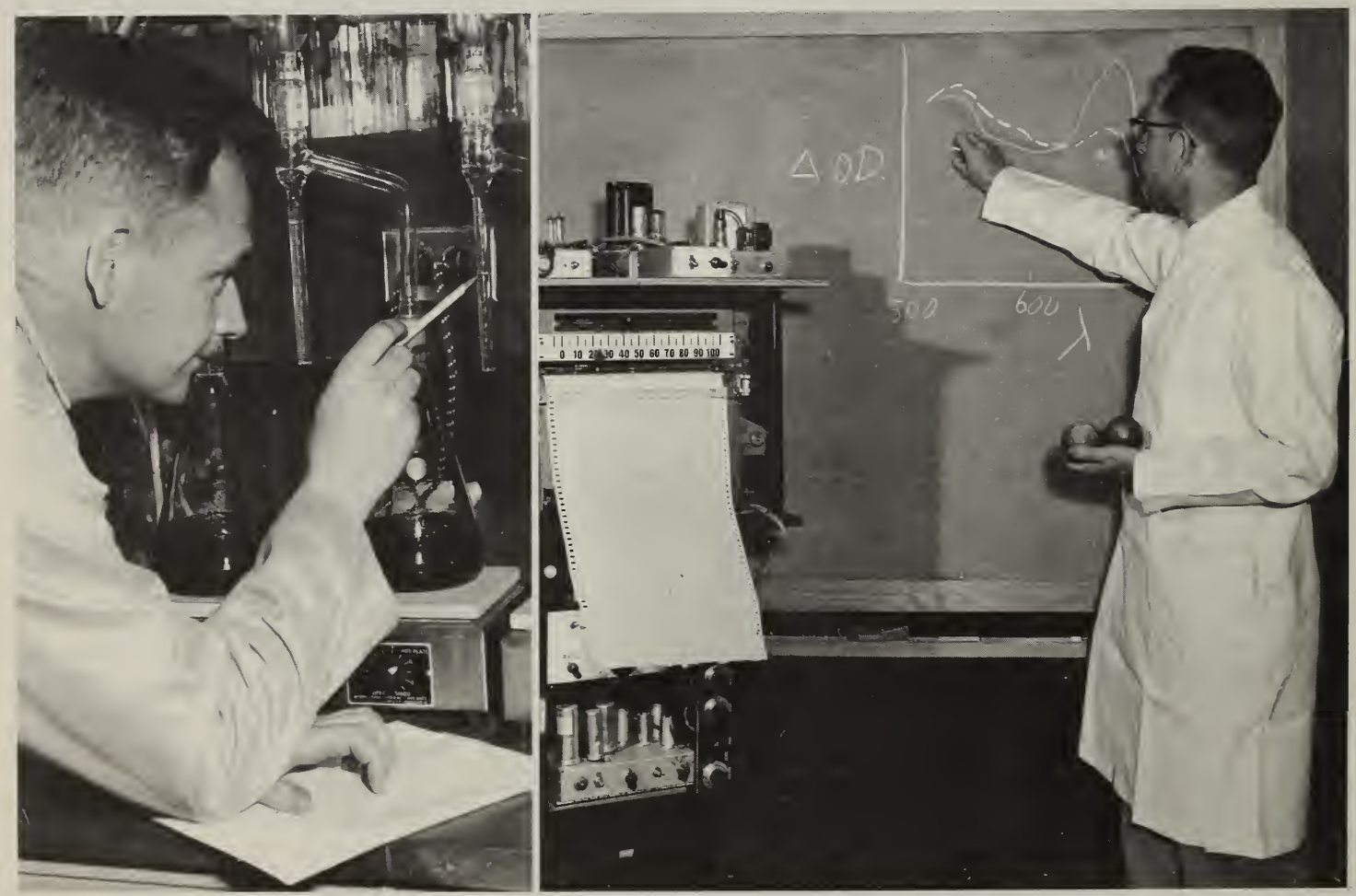
Promotional opportunities are excellent for plant physiologists who demonstrate initiative and ability to analyze problems and to plan and conduct productive research. A few applicants with a master's degree may be appointed at grade GS–7 and occasionally at GS–9; those with a doctor's degree may be appointed at GS–11, and occasionally at GS–12. Promotions to higher grades are made when the researcher demonstrates ability to assume greater responsibility and conduct more complex research. A highly competent and productive plant physiologist entering the Agricultural Research Service at GS–11 may expect to reach GS–12 and GS–13 within an average of 2 and 6 years, respectively. Exceptionally outstanding scientists may progress faster and to an even higher grade.

Employment Specifications

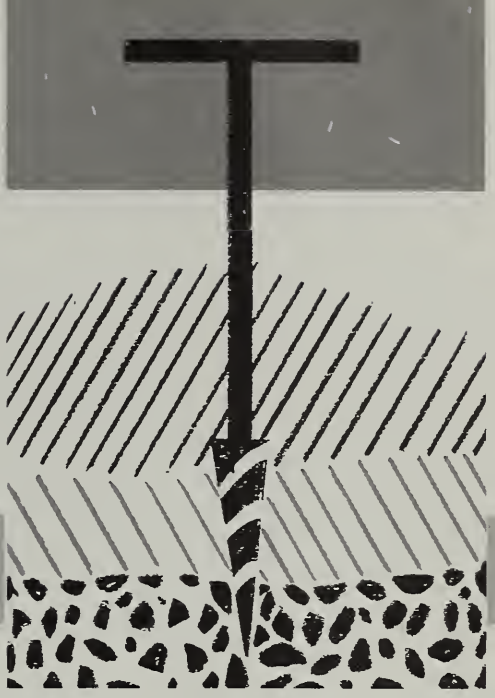
Over 90 percent of our plant physiologists are hired after they have received a doctor's degree. For these positions specialized background in postharvest physiology and plant biochemistry is desirable.

Employment Procedures

For further information you may write to: Personnel Division, Employment Section, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.



Soil Scientist



GS–5 and GS–7

■ Soil scientists in the Soil Conservation Service (SCS) play an important part in the national program of soil and water conservation. They collect and interpret information about soils that is basic to that program. They work beside recognized leaders in all phases of soil science and other fields. And they have opportunity to work in the great outdoors, at any of thousands of locations throughout the United States, Puerto Rico, and the Virgin Islands.

The major Soil Conservation Service responsibilities are:

- Helping land owners and operators plan and carry out conservation plans for the proper use and treatment for each acre, to protect the soil and assure its permanent productivity. This work is carried on through soil conservation districts that are operated by landowners themselves.
- Helping local organizations plan and develop small watershed projects that protect the watershed itself, reduce flooding and provide water for irrigation, livestock, wildlife, recreation, and municipal uses. SCS also plans and applies measures to reduce flood damage in major watersheds.
- Administering an accelerated program in the Great Plains that is bringing about greater agricultural stability in that region.
- Carrying on the National Cooperative Soil Survey to provide an inventory of the Nation's soils for use by many rural and urban land users and planners. Soil scientists have surveyed more than 700 million acres in this country.
- Carrying on snow survey and water supply forecasting work in the Western States that aids in planning seasonal use of irrigation water.
- Cooperating in Federal programs designed to increase employment opportunities in rural areas.

Duties

Soil scientists examine the soils in a field, studying each layer in the soil profile for all the physical and chemical characteristics—texture, color, structure, thickness, arrangement, etc.—that affect the use and management of the land. They note differences in slope, erosion, geologic formations, vegetation, and other features. They classify the soils, under a national soil classification system, into units that can be interpreted in terms of their capability. They collect samples from the soil horizons for laboratory examination. They prepare field notes and reports of the features mapped and observed.

Soil scientists collect data on crop adaptabilities and yields and responses to different systems of management; group soils according to their capability; predict yields of crops, grasses, and trees that can be produced under defined systems of management; predict physical behavior of soils in relation to engineering structures; and make interpretations for many other uses.

Some of them work in a soil investigation laboratory, where they analyze samples of soil, water, and vegetative materials to determine their physical and chemical properties; and they conduct studies to further the understanding of soil genesis and morphology.

Training

SCS provides opportunity for intensive and specialized training under competent, experienced leaders in all phases of soil science, both on the job and in group training centers.

Opportunity for Advancement

New professional employees usually enter SCS at grades GS–5 and GS–7. Higher grade positions normally are filled by promoting someone already in the Service, through the SCS Career Development and Promotion Plan. Under this plan employees have the opportunity to develop so they can accept greater responsibilities.

Qualifications

You will need a college degree with a major in soils or a related subject, such as agronomy, with at least 10 semester hours in soils.

How to Apply

Ask your college placement officer or local postmaster for the announcement of the examination and an application blank. Send your application to the USDA Board of Civil Service Examiners, Soil Conservation Service, in your area.

Section III

PART 5

CAREERS IN ENGINEERING

Civil (Highway) Engineer

GS–5 and GS–7

■ The Forest Service is now engaged in an extensive development and improvement program on the 154 National Forests. The magnitude of this program has been progressively increasing, and it is expected that this expansion will continue for many years.

The Job

To implement this improvement program, the Forest Service needs a skilled engineering staff. This increasing volume of work also indicates that Forest Service engineers will have better than normal opportunities to advance to more responsible and better paid positions.

Building Roads

Since at present approximately two-thirds of the over 180 million acres of National Forest lands are inaccessible by road, the largest activity in the civil and highway engineering field is the design and construction of new roads and bridges. At present the Forest Service is building over 4,000 miles of new road each year, and it is anticipated that this rate of construction will increase in the near future.

The complexity of this road building program challenges the maximum professional ability of the most capable engineers. The major portion of the new mileage now being built lies in rugged mountain terrain. In this type of work each new mile presents new problems which must be solved. These problems include economic analyses, selection of applicable construction standards, and route determination, along with the many design details—bridges must carry the heavy load of logs, which sometimes exceed the maximum permitted on State highways.

Road building isn't the only work done by Forest Service civil engineers. As road construction makes more areas accessible, other improvement must follow. Administrative structures, warehouses, dormitories, family housing, visitor information centers, dams, campgrounds, and lookout towers must be designed and built. Each location or site is different and previously developed plans must be modified or replaced to meet different requirements. This precludes the extensive use of so-called standard plans and requires the engineer on each job to work out his own solutions.

Organization of Work

Forest Service engineering work is normally organized to provide the young engineer with the opportunity to develop a broad background of training and experience. In most instances, for example, each of the 154 National Forests has its own engineering staff, directed by a forest engineer. Usually, the engineers assigned to the Forest are responsible for the complete engineering job. These people direct surveys, design, plan preparation, and supervise the construction for many types of improvement work. Each engineer in these comparatively small organizational units has opportunities to work on each stage of several types or classes of improvement work and the beginner is permitted to gain experience in as many varieties of jobs as is possible.

Also, the Forest Service uses civil engineers in a number of specialized fields. Among these are

cadastral surveys, topographic surveys and map making, materials testing, watershed protection, soils classifications, and photogrammetry. Some recent graduates may prefer to begin their professional engineering careers in one of these specialized fields. Others may prefer to gain 1 or 2 years of general field engineering experience before transferring into one of the specialties.

Promotional Opportunities

Engineers usually enter the Forest Service at the GS–5 or GS–7 level, depending on their qualifications and experience. After 6 months or a year, most are promoted to the next level—the 6-month promotion being possible under an approved individual training program. After the initial promotion, further advancement is on the basis of ability and merit. Engineering careers in the Forest Service extend through GS–16.

Training

From the time he enters on duty, the engineer's training and work assignments are planned to develop maximum professional competence. He is encouraged and aided in obtaining his professional license and in continuing his professional education. He works in close cooperation with experienced engineers. Opportunities are excellent for transfer between different areas of the country to obtain broader experience.

Qualification Requirements

To qualify for GS–5, you must have a bachelor's degree in civil (highway) engineering or a closely related engineering field. Entrance at the GS–7 level is possible if the applicant attained a master's degree or maintained a "B" average or better in college or graduated in the upper 25 percent of his class, qualified for an accredited honor society or attained other specified scholastic levels. Graduate study, advanced degrees, or professional experience will qualify you for entrance at higher levels.

Additional Information

For more information write to one of the offices listed below and ask for a copy of the booklet "The Forest Service Engineer."

Director, Division of Engineering
U.S. Forest Service
Washington, D.C., 20250

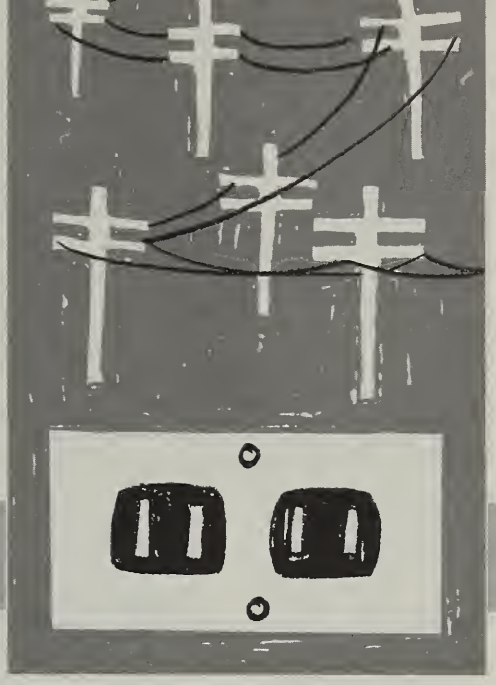
Or you may write to the Regional Forester at one of the following addresses:

Federal Building, Missoula, Mont., 59801
Federal Center, Building 85, Denver, Colo., 80225
Federal Building, 517 Gold SW., Albuquerque, N. Mex., 87101
Forest Service Building, Ogden, Utah, 84403
630 Sansome Street, San Francisco, Calif., 94111
729 Northeast Oregon Street, Portland, Oreg., 97208
Center Building, 6816 Market Street, Upper Darby, Pa., 19082
50 Seventh Street NE., Atlanta, Ga., 30323
710 North Sixth Street, Milwaukee, Wis., 53203
Fifth Street Office Building, Juneau, Alaska, 99801

How to Apply

You can apply for these positions up to 9 months before graduation from college. Form 57, "Application for Federal Employment," available at any post office, should be completed and sent to one of the offices listed above. No formal examination is necessary if you hold a suitable degree.

Electrical Engineer



GS–5 and GS–7

■ The Rural Electrification Administration (REA) helps bring electricity and telephone service to rural America through long-term loans and technical assistance. Engineering, management, and accounting services are important parts of this assistance.

In 28 years of operation, REA has financed the construction of more than 1,000 rural electric systems serving 5 million consumers in 46 states, the Virgin Islands, and Puerto Rico.

Since 1949 when the telephone loan program began, more than 800 REA-financed telephone companies and cooperatives have placed close to 3,400 modern dial exchanges in operation in rural areas to serve more than 1½ million subscribers.

REA employs about 1,000 employees, most of whom work in Washington, D.C. Since REA has no branch or field offices, about 250 employees (engineers, management representatives, and accountants) operate from their places of residence in various locations scattered across the country which serve as their official headquarters. Employees receive, in addition to salary, per diem payment for expenses while away from official headquarters. There is also a travel allowance to cover the expenses of employees driving their own cars on official business.

Career Opportunities

Seniors majoring in electrical engineering are recruited for REA's Electrical and Telephone Engineer Trainee Programs. REA engineers gain experience through a wide variety of field and headquarters engineering work. Some of the phases included are:

Telephone Program

- Basic system design.
- Central office switching equipment.
- Transmission (electronic equipment, such as carrier, voice repeaters, radio, and microwave).
- Pole line design and construction (wire and cable).
- System economic analysis and cost studies.
- Engineering and construction contracts.
- System operation and maintenance.

Electric Program

- Transmission and distribution system design.
- Substations and switching stations.
- Pole line design and construction.
- System protection and inductive coordination.
- Radio, power line carrier, supervisory control, and telemetering systems.
- Steam, diesel, and hydro plant design, construction, technical operation, and maintenance.
- Plant acceptance testing.

Office and Field Experience

Some engineer trainees with either the electric or telephone program begin their career by traveling for 3 or 4 months with an experienced field engineer, while others remain in Washington, D.C. There might also be short assignments in the field with a rural system financed by REA, or with an engineering firm engaged in REA work. While away from headquarters all employees receive a per diem expense allowance, in addition to their salary.

After an initial period of field or office experience, all REA engineers are transferred to Washington, D.C., for training. This training takes the form of lecture-discussion periods supplemented by related on-the-job work. Here the engineer becomes acquainted with REA procedures, requirements, and practices. REA training activities are conducted by experienced staff members and specialists in the various fields of telephone and electrical engineering.

Graduate Study

Employees at the headquarters office have the opportunity, if they desire, to do graduate work at excellent universities in the Washington area or at the U.S. Department of Agriculture Graduate School. All of these offer evening classes at nominal cost.

Work Assignment

After completing the training course, REA engineers receive their first regular assignment which is in Washington, D.C. Later there may be opportunities for field assignments. Although exact locations cannot be predicted, field assignments that are mutually satisfactory are made as vacancies permit.

Entrance Level

Applicants with a bachelor's degree in electrical engineering normally begin at GS–5. However, application may be filed by candidates for the degree in advance of graduation. In some cases, the Civil Service Commission may rate the candidate eligible for GS–7 because of superior academic achievements, 1 year of professional engineering work, or a master's degree. REA hires engineer trainees at the GS–7 level if they receive an eligible rating of GS–7 from the Commission, its appropriate regional offices, or any board of civil service examiners. Those rated eligible for GS–5 only are appointed at GS–5, and upon successfully completing REA's 6-month training program are promoted to GS–7.

Promotions

The engineer is eligible for further promotion to GS–9, GS–11, and GS–12 upon successful completion of progressively responsible assignments of not less than 1 year at each grade. Most REA engineer trainees have been promoted to GS–12 within 4 or 5 years, and many who have longer service now hold more advanced positions.

Travel

The Government pays traveling expenses whenever you travel on official business, and it will pay your moving expenses incident to reporting for duty and for subsequent changes in headquarters.

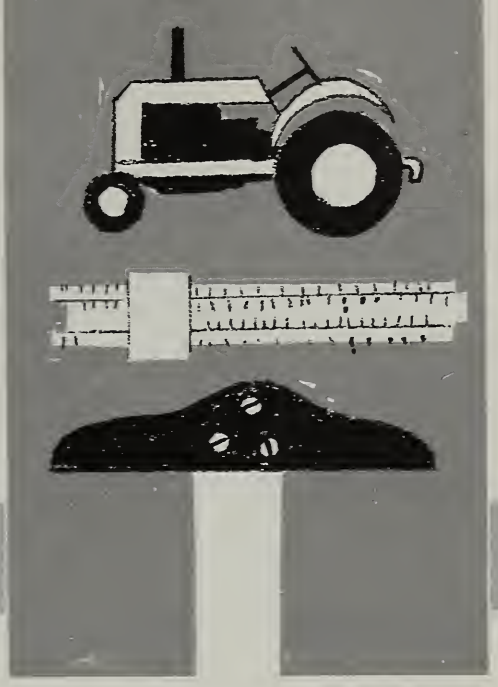
Additional Information

For additional information about opportunities for engineers with REA contact:

Director
Personnel Management Division
Rural Electrification Administration
U.S. Department of Agriculture
Washington, D.C., 20250

U.S. Department of Agriculture

Engineers In Research



GS–5, 7, 9, 11, 12

■ Agricultural, chemical, and mechanical engineers are important to Agricultural Research Service (ARS) programs.

Detailed Duties

Agricultural engineers conduct fundamental and applied research on the engineering phases of investigations concerned with (1) harvesting and processing of crops; (2) tillage, related soil mechanics, and crop growing; (3) livestock production and farm structures; and (4) application of electrical energy to agriculture. Examples of their work are:

- Agricultural engineers develop mathematical models of hydrologic performance of agricultural watersheds to evaluate influences of soil characteristics, agronomic practices, and engineering measures.
- Agricultural engineers have designed a fertilizer distributor and eatablished a research program to develop and analyze its effectiveness.
- Agricultural engineers have developed a window closure to economically reduce the heat flow and air leakage in farm homes.

Chemical and mechanical engineers develop processes, methods, techniques, and equipment to increase the uses of agricultural products or to establish new uses. They adapt laboratory developments to pilot plant or industry scale operations. They work closely with chemists, technologists, economists, and other engineers in the utilization laboratories during developmental stages of the projects, and with industry representatives during application stages.

- A chemical engineer in California developed a pilot plant for "foam-mat" drying of juice concentrates which give beverages flavor, color, and vitamin content comparable to fresh juices.
- A chemical engineer in Illinois successfully converted a laboratory process for developing new gums from cereal-derived raw materials.
- A mechanical engineer developed a new process and equipment for producing and dispersing pesticide aerosols.

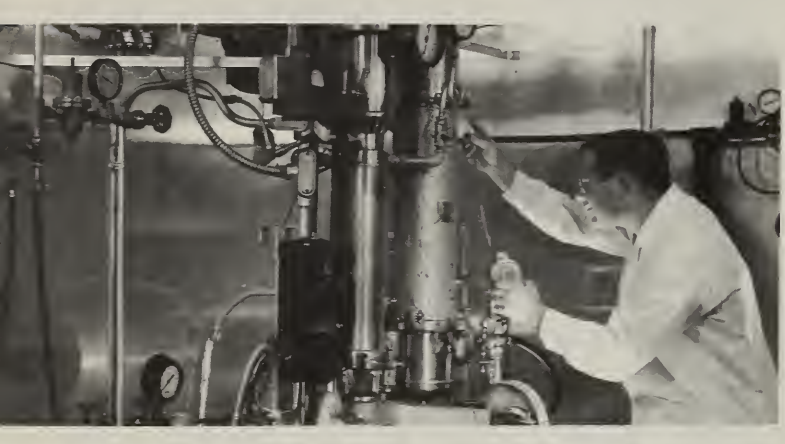
While some of the egineering research of the ARS is done at the Beltsville Research Center located outside Washington, D.C., many engineers are assigned to the utilization laboratories and field research stations.

At Beltsville, engineers study ways of reducing the increasing costs of farm buildings and of improving farm facilities, equipment, and machines. They study year-round ventilation and air conditioning to detect functional problems, required controls, performance requirements, and effects on livestock and poultry. They also work with committees from state agricultural colleges in the operation of the Cooperative Farm Building Plan Exchange.

At the Eastern Utilization Research and Development Division in Wyndmoor, Pa. (near Philadelphia), engineers work with research laboratories in pilot plant studies in processing potato flakes; producing whole dry milk; recovering the aroma of fruit juices; handling, preserving, and processing meats; and tanning leather to meet the competition of plastics.

At the Northern Utilization Research and Development Division in Peoria, Ill., engineers conduct pilot plant studies to improve dry milling of corn; to develop special milling techniques for separating cereal flours into fractions which contain varied proportions of starch and protein; to analyze processing methods of high-amylose corn and the recovery of amylose starch; and to improve the recovery process of fatty acids from vegetable oils.

At the Southern Utilization Research and Development Division in New Orleans, La., engineers are developing a new cotton opener-cleaner for textile mills; methods for measuring grain softness; methods for investigating the effect of fiber length distribution on processing performance; improved cottonseed milling techniques; production of paints, varnishes, and enamels with tung oil; continuous turpentine stills and continuous processes for dehydration of turpentine; and improved citrus fruit frozen concentrates, cucumber fermentation, and sweet potato dehydration.



At the Western Utilization Research and Development Division in Albany, Calif. (San Francisco Bay area), engineers study pilot plant operations in pasteurization, sterilization, concentration, and dehydration of fruit and vegetable juices; dehydration of fruits, vegetables, and rice; dehydrofreezing and dehydrocanning of food products; and basic research in evaporation, heat transfer, and fluid flow.

Promotional Opportunities

Engineers may be appointed at the grade and salary level for which their education and experience qualify them. Excellent promotional opportunities exist. Promotions are related to productivity, initiative, ability, accomplishments, and creativity rather than to the assignment of additional administrative or supervisory duties.

Employment Specifications

To qualify as a GS–5, the applicant must have completed a full 4-year (or longer) professional engineering curriculum, accredited by the Engineers' Council for Professional Development, or an equivalent curriculum. Study must be in the same branch of engineering as the one for which the person applies or in a closely allied branch.

Experience required for positions at GS–7 and above is as follows:

Grade of position	Total professional engineering experience	Specialized experience
GS–7	1 year	1 year
GS–9	2 years	1 year
GS–11 through GS–15	3 years	1 year

Graduate study may be substituted for experience as follows:

- One year of graduate study may be substituted for 1 year of professional experience and qualifies the applicant in full for GS–7.
- Two years of graduate study may be substituted for 2 years of professional experience and qualifies the applicant in full for GS–9.
- Completion of all requirements for the doctor's degree qualifies the applicant in full for GS–11.

Engineers with master's degrees are usually appointed at grades GS–7 or GS–9; those with doctorates are appointed at GS–11 or GS–12. Graduates meeting "quality" requirements may be eligible at the higher grades in each case.

Because of the complexity of modern research, ARS places special emphasis on recruiting well-qualified scientists with graduate training, preferably through the doctorate level. Some high-quality graduates with bachelor's degrees are employed for research work, but they are encouraged to pursue formal graduate training.

Employment Procedures

If you are interested in these positions, complete examination and employment information can be obtained from the Utilization Laboratory nearest your home or from the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

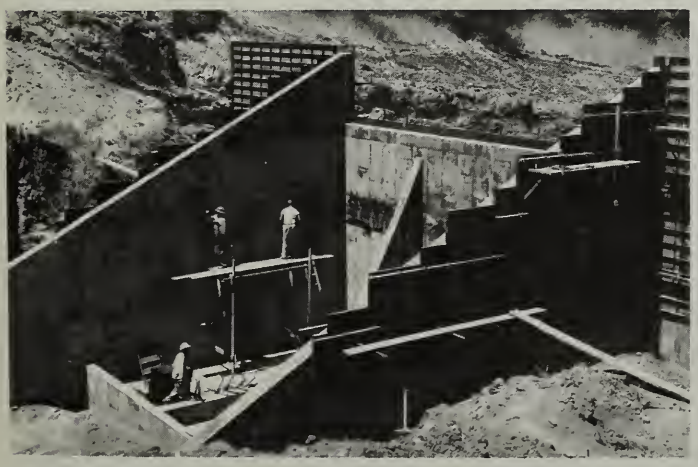
Engineer

(Soil Conservation)

GS–5 and GS–7

■ Engineers in the Soil Conservation Service (SCS) play an important role in the national program of soil and water conservation. The conservation structures and systems in this broad program call for many varied engineering services—structural design, hydrology, hydraulics, soil mechanics, and cartography. Engineers have the opportunity to work "across the board" or to specialize, depending on the size of the job to be done. On small jobs the engineer may do all the engineering work, from design through construction; on large jobs he may do just one phase of the engineering work.

One of the Service's primary responsibilities is to give technical help to soil conservation districts that are organized under State law and operated by the landowners themselves. SCS helps the districts plan and carry out conservation plans on individual farms and ranches. These plans assure the best use of, and proper treatment to keep it permanently productive.



Another major function is to help local organizations plan and develop small watershed projects that protect the watershed itself; reduce floods; and provide water for irrigation, livestock, wildlife, recreation, and municipal uses. SCS also plans and applies measures to reduce flood damage in major watersheds.

The Service provides technical information, interpretations of soils, and small watershed hydrologic data for use by city and county governments, highway planners, zoning bodies, and others.

Duties

SCS engineers design and supervise construction of earth-fill and reinforced concrete dams for flood prevention and water storage; spillways, drop structures, outlets, and structures for control of erosion and water; drainage, irrigation, terrace, and water-disposal systems; and streambank protection and channel stabilization works.

SCS engineers make hydrologic studies of rainfall, runoff, and effects of land use and treatment and engineering works on flood flows and areas inundated.

In the laboratory, the engineer supervises tests to determine structural quality of earth materials, density-moisture relationships, and amount and rate of consolidation under loads. These laboratory findings are the basis of recommendations for the construction of earth-fill dams and related engineering works. SCS engineers supervise the compilation and reproduction of maps, charts, and photographs, including ground-control surveys and aerial photography.

Opportunity for Advancement

New professional employees usually enter the Service at grades GS–5 and GS–7. Higher grade positions normally are filled by promoting someone already in the Service, through the SCS Career Development and Promotion Plan. Under this plan employees have the opportunity to develop their professional and management competence so that they can accept positions of greater responsibility. SCS provides intensive and specialized training under competent, experienced technical men, both on the job and in group training centers.

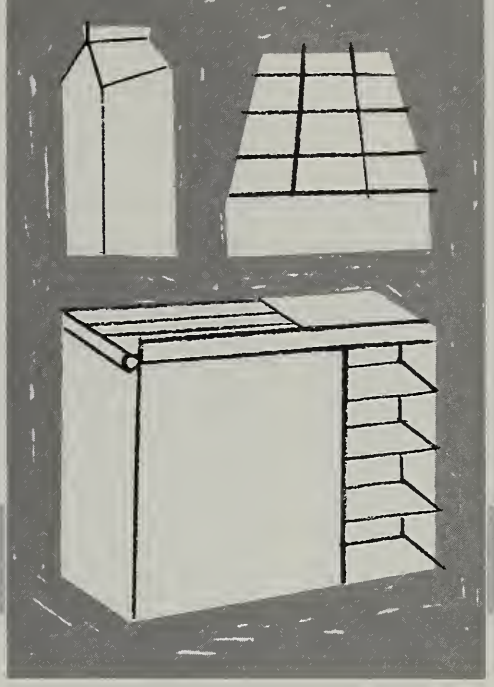
Qualifications

Applicants for these positions will need a civil or agricultural engineering degree, with emphasis on hydrology, structural design, drainage, or irrigation.

How to Apply

Ask the college placement officer or local postmaster for the announcement of the examination and an application form appropriate to engineers in the Soil Conservation Service. Send the application form to the USDA Board of Civil Service Examiners, Soil Conservation Service, responsible for the area in which you wish to work.

Industrial Engineer



GS–5 or GS–7

■ Planning new layouts for wholesale markets, testing new packages for fresh fruits and vegetables, dairy, and meat products, developing more efficient work methods and equipment to handle farm products from farmer to processor to wholesaler to retailer—these are the fields of the industrial engineer in agricultural marketing research.

Duties

In the complex marketing system in the United States today, farm and food products pass through many different facilities and are handled many times as they move from farm to consumer. The industrial engineer in the Transportation and Facilities Research Division of USDA's Agricultural Research Service (ARS) develops practical work methods and other means that the marketing industry can use to reduce or keep to a minimum the costs of getting farm products from the farm to the consumer.

An engineer may be assigned to the Washington office of the Division or to a field office located in a major producing area. In either case, his work takes him into different parts of the country, to the packing plants, warehouses, wholesale markets, or retail stores which are the laboratories for his research.

He may work with problems in handling livestock or poultry, fresh fruits and vegetables, cotton or grain at auction markets, packing plants, warehouses, or elevators. He may study new methods of packaging all the way from the growing point, through storage or terminal market, to wholesaler and to retailer. He may deal strictly with operations to wholesale markets or retail stores. Or he may be concerned with the entire food wholesaling facility for one city.

Training

During 6 months of intensive on-the-job training, the new engineer learns about the general structure of the marketing industry and the particular problems of the segment with which he will be working. He works closely with a marketing specialist in his assigned field to learn about distribution and handling practices for farm products. He learns the past history of the industry and the changes that are taking place. He observes good and bad marketing facilities. He sees what has been accomplished through marketing research, why it has been done and how it has helped, and he finds out what work still needs to be done.

ARS engineers meet and work with members of the marketing industry, State universities, and State offices concerned with agricultural marketing. Some also work closely with biological scientists who conduct research on maintaining the quality of farm products in marketing channels or with other USDA personnel who are concerned with grade standards or inspection requirements for farm products.

In applying industrial engineering techniques to problems in marketing research, ARS engineers:

- Make time and motion studies in the slaughtering, processing, and packaging of poultry and help design equipment that speeds up the work.

- Develop a layout for a meat packing plant or dairy plant to provide the optimum arrangement of equipment and work areas.
- Study the handling of grain in and out of elevators or cotton in warehouses to find the most efficient and economical combination of workers and equipment.
- Make cost analyses of alternative techniques for handling operations in retail stores.
- Simplify work procedures for inventory control and sales accounting for wholesale food distributors.
- Evaluate the labor requirements for filling fresh fruit in new types of packages and for handling the packages.
- Determine, with marketing specialists, the most suitable methods, equipment, arrangement of equipment, and building layout for a city wholesale food marketing facility.

After the research is completed, the next part of the job is to tell the marketing industry about the results. USDA publishes and distributes most of these studies as Marketing Research Reports. These reports, with the technical data that support the conclusions, must tell clearly and effectively how the marketing industry can use the research findings and what can be gained by using them. Engineers also spread information about their research through personal contacts, speeches, and articles for the trade press, or through other media used by the U.S. Department of Agriculture.

Advancement

Candidates for industrial engineer positions with the Agricultural Research Service enter on duty at either the GS–5, or GS–7 level, depending on their degree of education or experience or both. Those beginning at the GS–5 level are placed in an intensive on-the-job training program, which upon satisfactory completion, at the end of 6 months will enable the employee to be promoted to GS–7. After 1 year of service at the GS–7 level, employees will be eligible for promotion to GS–9. The advancement opportunities to the higher grade levels are very good.

Employment Specifications

Satisfactory completion of a full 4-year or longer professional engineer curriculum leading to a bachelor's degree in industrial engineering is required.

Employment Procedures

For further information, write to the Personnel Division, Employment Section, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Mechanical Engineer

GS–5 and GS–7

■ The U.S. Forest Service needs beginning mechanical engineers in the fields of equipment development and equipment management. Both of these engineering activities are concerned with the development, testing, selection, and use of motor vehicles, aerial equipment, tractors, construction and maintenance equipment, and many other types of mechanical units which are needed by the Forest Service in its many and widely diversified field activities. These field operations are conducted in most of the 50 States on the 186 million acres of National Forest and National Grassland—under many variations of terrain and climate.

Duties

The two types of work for mechanical engineers—equipment development and equipment management—are in many respects interrelated. It is likely that some mechanical engineers, during their professional careers with the Forest Service, will transfer from one group to the other. If so, they will be given ample opportunity to broaden their training and thus prepare for promotions to supervisory positions.

Equipment Development

Equipment development provides essential support for a wide range of Forest Service activities. In many instances the type of work to be done by the Forest Service in the air, the field, laboratory, shop, or office is different from that accomplished by any other organization; therefore, much of the equipment needed is not normally used by any other public agency or private industry, at least not to the extent necessary to accomplish efficient work on the many large projects of the Forest Service. Among these operations are forest fire prevention and control, brush cutting, tree planting, timber harvesting, mountain road construction and maintenance, as well as the transportation requirements for moving people and material into remote areas. These are a few of the responsibilities of Forest Service mechanical engineers in equipment development work; there are many others, some of which are tapping the unknown.

When an additional project is assigned to one of the equipment development centers, Forest Service mechanical engineers at either Arcadia, Calif., or Missoula, Mont., make studies of the field requirements for getting the job done. They then search the commercial market for equipment or devices which will do it effectively. When a unit is found which may be suitable, these engineers conduct a series of tests in actual field operations. If it is then found practical, proper purchase specifications are prepared and distributed for field use on a Service-wide basis.

Sometimes no commercial equipment is found suitable, even when changes are made. In these instances, the mechanical engineers try to develop effective devices by starting from "scratch." Thus they frequently design, construct, and test units which have never been used before. Normally there are several development projects concurrently in progress at each of the development centers.

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Equipment Management

Equipment management is an equally interesting field. In its daily activities, the Forest Service uses a fleet of equipment which includes over 600 passenger cars, 6,500 light trucks, 1,000 heavy trucks, 50 airplanes, several hundred fire-fighting units, 700 tractors, and 300 road maintainers; also numerous aircraft under private contract. At the various regional offices, Forest Service mechanical engineers are responsible for the management of this fleet. Management duties include consultations with field personnel leading toward the selection of types and sizes for purchase; the preparation of purchase specifications and requisitions; the development of field servicing standards; the supervision, direction, and staffing of maintenance (repair) shops; the training of operators; and the many other related duties required to provide effective, dependable, and economical units for use in the field.

Advancement

Mechanical engineers who have recently completed their college work usually enter the Forest Service at GS–5 or GS–7, depending on their qualifications and experience. After 6 months or a year, most are promoted to the next level—the 6-month promotion being possible under an approved individual training program. After the initial promotion, further advancement is on the basis of ability and merit. Classification and rates of pay for Forest Service engineers extend through grade GS–16.

From the time he enters on duty, the engineer's training and work assignments are planned to develop his professional competence. He is encouraged and aided in continuing his professional education and association with professional societies. He works in close cooperation with experienced engineers. Opportunities for obtaining broader experience by transfer to other types of work are excellent.

Qualifications

To qualify for GS–5 you must have a bachelor's degree in mechanical engineering. You will be eligible for GS–7 if you have a master's dergee, maintain a "B" average in college or are a member of an accredited honor society, or graduate in the top 25 percent of your class, or qualify through other specified scholastic achievements. Graduate study, advanced degrees, or post-graduate professional experience will qualify you for entrance at higher levels.

Additional Information

For more information write to one of the offices listed below and ask for a copy of the booklet "The Forest Service Engineer":

Director, Division of Engineering
U.S. Forest Service
Washington, D.C., 20250

Or you may write to the Regional Forester at one of the following addresses:

Federal Building, Missoula, Mont., 59801
Federal Center, Building 85, Denver, Colo., 80225
Federal Building, 517 Gold SW., Albuquerque N. Mex., 87101
Forest Service Building, Ogden, Utah, 84403
630 Sansome Street, San Francisco, Calif., 94111
729 Northeast Oregon Street, Portland, Oreg., 97208
Center Building, 6816 Market Street, Upper Darby, Pa., 19082
50 Seventh Street NE., Atlanta, Ga., 30323
710 North Sixth Street, Milwaukee, Wis., 53203
Fifth Street Office Building, Juneau, Alaska, 99801

How To Apply

You can apply for these positions up to 9 months before graduation from college. Form 57, "Application for Federal Employment," available at any post office, should be completed and sent to one of the offices listed above. No formal examination is necessary if you hold a suitable degree.

Section III

PART 6

CAREERS IN OTHER PROFESSIONS

Agricultural Economist

■ Agricultural economics research traces back to early farm management work and has been conducted in various units of the U.S. Department of Agriculture since 1905. The Economic Research Service, the agency now responsible for this work, conducts programs of research in agricultural production and marketing economics, both in domestic and foreign commerce.

Farmers and many others use information from the Economic Research Service (1) to help adjust to economic forces affecting prices, supply, and consumption of farm products and (2) to understand conditions affecting farm people or the agricultural economy. Agricultural industries use the information to improve the merchandising of their products. Through its publications, the Economic Research Service provides information and assistance to exporters of agricultural commodities.

Duties

The work of the Economic Research Service's agricultural economists falls into these main categories: farm production economics, resource economics, marketing economics, economic and statistical analysis, foreign regional analysis, and foreign trade analysis and economic development.

To meet the need for economic information, about 100 outlook and situation reports are published each year. These reports analyze the changing situation and forecast the most probable future developments. Farmers use these materials in deciding what to produce and when to sell. Other users are those who collect and assemble farm products, those who transport and process them, those who buy and sell at wholesale and retail levels, and those who ship to foreign markets.

In addition to keeping a sensitive finger on the economic pulse of agriculture, the Economic Research Service has a research program as broad as agriculture itself. Research reports—about 400 a year—present these findings to the public. People engaged in every stage of agricultural production and marketing make constant use of these findings. Much of the research material is used by Members of Congress to assist them in developing legislation.

Much farm economic research is designed to answer questions such as: "Will it pay?" and "Which is the best choice?" These questions apply to new farm techniques, needed adjustments, new equipment, and proposals for land and water use and development. Recognizing the fact that the marketing costs take the major portion of the dollar the consumer spends for food, agricultural economists constantly study costs of marketing farm products and test ways of reducing these costs. In the rural development program, agricultural economists study the origin, extent, location, and nature of low-income conditions. They develop and evaluate possible methods of increasing employment and income in rural areas.

While much economic research is directed at specific problems, fundamental investigations are also underway; for example, studies of agriculture's role in the economic-growth programs of underdeveloped countries. There is need for much better understanding of the complex eco-

nomic, social, and political factors as they may operate at a particular stage in the development of these countries.

On the domestic scene, examples include investigations of the economics of resource use, particularly the use of the national heritage of land and water, the institutions that affect natural resource use and distribute agricultural income, and the organizational arrangements that farmers and communities employ to assure more efficient uses of the natural resources.

In the present fast-moving, ever-changing world, we must stay alert to identify the emerging problems and to catch them while they are small. Agricultural economists must project into the future the probable consequences of alternative courses of action taken today.

Economic research keeps abreast of changing times by measurement, evaluation, and appraisal of problems, as well as by determining how problems have arisen. From such continuing efforts there is being built a foundation of economic information that can be marshaled against the tough and persistent problems of agriculture today and tomorrow.

Qualification Requirements

As an undergraduate in your senior year, you can qualify for an economist position by passing the Federal Service Entrance Examination and meeting the academic requirements for a bachelor's degree, provided that you have at least 21 semester hours in economics and 3 semester hours in statistics. Entrance levels are at GS–5 and GS–7.

Those who have completed all requirements for advanced degrees or expect to complete the requirements within 9 months may be rated eligible for higher level positions. Those who have demonstrated superior ability in their graduate studies may receive eligibility at levels higher than that of nonsuperior graduates. Those with appropriate experience, in addition to their academic background, may be rated eligible for the higher level grades, depending upon the type, length, and quality of their experience.

Training

Opportunity for special-course study, as well as on-the-job training, is provided to employees, as deemed necessary, to broaden their knowledge and skill and equip them for higher level assignments.

Promotional Opportunities

Prospects for promotion to higher level positions are excellent, and are contingent upon demonstrated ability and requirements of the Service.

Where To Apply

For additional information on applying for a job as an agricultural economist, you can write to:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

U.S. Department of Agriculture

Agricultural Economist

(International)

GS–7—GS–11

■ The Foreign Agricultural Service offers career service in international activities to the graduate or undergraduate student majoring in economics or agricultural marketing. Included among these employees are both undergraduate students hired for summer employment and junior professionals who are beginning their careers after the completion of their college work.

Duties

Agricultural economists with the Foreign Agricultural Service work toward careers in international market development, economic analysis, overseas representation, and related activities. After a period of training and experience in Washington, D.C., they are considered for oversea assignments as agricultural attachés or assistant agricultural attachés.

Agricultural economists analyze and appraise the agricultural conditions, developments, and trends in foreign areas that significantly affect the agricultural aspects of U.S. foreign economic policy and international trade in American farm products. They analyze and interpret the statistical reports of agricultural attachés and other source materials on the agricultural resources, utilization, production, imports and exports, prices, finance, stocks, balance of payments, food and fiber requirements, and government and commercial trade policies and programs. Their findings are primarily used in developing the agricultural elements of foreign economic policy, in participating in international agricultural trade negotations and commodity agreements, and in administering import and export controls on agricultural products.

Role of the Agricultural Attaché

The agricultural attaché has been called the eyes and ears of the American farmer abroad. The phrase is apt but not all inclusive. Agricultural attachés stationed in countries abroad carry out a variety of tasks of great importance not only to American agriculture but also to the rest of our economy. Basically the agricultural attaché has three jobs:

- First, there is the job of reporting on important developments in foreign agriculture which might affect the American farmer. This information helps our farmers in their production and marketing procedures so that they may compete most effectively in world markets.
- A second job is to promote and to safeguard the market for U.S. products abroad. The potential of this aspect of the attaché's work is readily apparent when you consider both the great need for foodstuffs in various parts of the world and the enormous production rate of American agriculture.
- A third job is one of representation. If the agricultural attaché is to succeed in the two major objectives listed above, he must first create a climate of good will. He must achieve an understanding and acceptance of American agricultural policy among our customers abroad.

Advancement and Training

Opportunities for advancement and training are exceptionally good. The Foreign Agricultural Service is able to provide for individual supervision of its employees, for thoughtful orientation to job requirements, and for careful follow up and evaluation of performance. Employees are given every opportunity to achieve their highest potential, and to develop for assignments of greater responsibility. Young professionals are placed in operating positions in the Washington office of the Foreign Agricultural Service and given the opportunity to develop along the lines of their greatest capability. The Junior Professional Development Program provides a broad economic orientation of the agency, its problems, objectives, organization, programs, public relations, and intergovernmental relationships.

A junior professional who does well may expect to receive promotions regularly, as he becomes eligible, until he reaches grade GS–11. Beyond that grade, the opportunities for advancement are excellent for agricultural economists.

Qualification Requirements

Under this program the Foreign Agricultural Service is looking for young people who have completed all requirements for a degree in agricultural economics or agricultural marketing. These people are selected from eligibles in the Federal Service Entrance Examination. They are appointed at GS–5 or GS–7, depending on the grade for which they are eligible and rated. Graduate students in agricultural economics or agricultural marketing who have qualified in the Economist Examination (Agricultural Economist Option) or the Agricultural Marketing Specialist Examination (Commodity Distribution, Foreign, Option) are also selected. Recruitment from these examinations is generally at the GS–9 level or higher. We prefer that these young people have a definite interest in performing one or more tours of foreign service when the opportunity arises. Generally, the applicant should not expect to be assigned to an oversea post within the first 2 or 3 years.

Student Trainee Program

In the Student Trainee Program, the Foreign Agricultural Service is looking for undergraduates who have completed at least 2 years of college and who plan to continue through at least a bachelor's degree with a major in agricultural economics. These young people will be selected from eligibles in the Student Trainee Examination. They are appointed at GS–3 or GS–4, depending on the grade for which they are eligible and rated. They receive career-conditional appointments, are employed during the summer months, and then are placed on furlough to return to school. If they wish to return after the school year and their services have been satisfactory, they may return to duty without further examination.

Scope of Activities

The Foreign Agricultural Service represents the U.S. Department of Agriculture at 61 oversea posts, covering over 100 principal foreign countries. This far-reaching and complex program is operated by a varied and highly professional staff in Washington, D.C., and a small staff at each oversea post.

How To Apply

If you desire more information on the Foreign Agricultural Service and how to become a part of it, write to:

Director, Personnel Division
Foreign Agricultural Service
U.S. Department of Agriculture
Washington, D.C., 20250

U.S. Department of Agriculture

Agricultural Statistician

GS–5 and GS–7

■ George Washington was one of the earliest assemblers of agricultural statistics. In response to a letter from a friend in England in 1791, he gathered information from leading farmers in five States on prices, rents, crops, and taxes. The information he was able to gather for his English friend was insignificant compared to the statistics gathered today by agricultural statisticians in the Statistical Reporting Service.

Duties

Today, statistics are gathered on such things as acreage, yield, and production of crops; livestock and poultry production; prices received for agricultural commodities; farm employment; and wage rates. Agricultural statisticians prepare forecasts, estimates, and reports on many other aspects of the agricultural economy.

To accomplish this job, the Statistical Reporting Service (SRS) has, over a period of 100 years, developed into a complex, nationwide organization. It provides a great deal of career flexibility because it has a large number of professional positions; provides opportunity for work involving a variety of crops, livestock, and prices; covers all the United States; and is increasing emphasis on mathematical-statistical techniques and electronic-data processing.

These statistics find a wide range of users. They help the farmer to chart a course to more efficient production and marketing of his products. They help processors and distributors to adopt more orderly marketing methods that benefit both producer and consumer. They help lending agencies make decisions on financing a wide range of agricultural business. They help manufacturers of farm machinery and suppliers locate their best markets. They provide the basis for government actions in the fields of production control, allocations, price supports, conservation, and foreign trade.

Career Opportunities

The technical staff of SRS is composed of agricultural statisticians and supervisory agricultural statisticians, as well as mathematical statisticians. Agricultural statisticians work as commodity specialists in 45 field offices covering the 50 States and in Washington, D.C. Mathematical statisticians are presently primarily employed only in Washington.

The typical SRS statistician begins his career in one of the field offices where most of the entrance positions are located. Here, under the supervision of the State statistician in charge, he learns the rudiments of the agricultural estimating procedures, particularly as they relate to that State. His training progresses in accordance with a definite program which includes periodic rotation of assignments to provide for the development of skills in different commodity fields.

Tasks include (1) questionnaire design, (2) mailing list development and maintenance, (3) field enumerator training and supervision, (4) questionnaire editing, (5) survey summarization, (6) preparation of estimates based on survey indications, and (7) writing of technical reports to the Crop Reporting Board and of news releases and publi-

cations to disseminate statistical information on agriculture.

Field offices prepare regularly scheduled estimates and statistical reports for forwarding to Washington for review and publication by the Crop Reporting Board. In addition, they collect and publish data of particular interest to their States, such as estimates of crop acreages and production and livestock numbers by counties or crop reporting districts. Commodity bulletins for field crops, fruits, vegetables, livestock, and poultry for a State are also published. Preparation of State publications is usually one phase of a statistician's work.

Members of the Washington staff plan surveys and review the estimates submitted by the State offices, and as members of the Crop Reporting Board they prepare the final reports for the Nation. The commodity specialists travel extensively throughout the production areas keeping abreast of growing conditions.

Promotional Opportunities

Of the 375 professional statisticians in SRS, 25 percent are stationed in Washington and 75 percent in field offices. Twenty percent of the field office statisticians are in starting grades GS–5 and GS–7. The average length of time spent as a GS–5 is 6 months and as a GS–7 13 to 15 months. After approximately 2 years in a field office, a statistician who has progressed satisfactorily may be moved to another State office with a somewhat different set of estimating problems. Here, he will work in a higher position where, under the tutelage of the statistician in charge, he gains experience for another 2 or 3 years. He may also be enrolled in in-service training courses to increase his proficiency in statistical methods. Later promotional opportunities will depend upon his demonstrated abilities, his interests, and the needs of the Service.

Those who show promise for further growth are usually offered an opportunity to gain experience in the Washington office. These appointments are usually at the GS–11 or GS–12 level. After a minimum of 2 years of Washington duty, the statistician may be assigned to a more responsible position in Washington; or he may be returned to the field, possibly as assistant head of a State office. In summary, SRS offers excellent opportunities for advancement and a satisfying career; in 1962, 36 percent of the professional staff were serving in positions at the GS–13 level or higher.

Qualifications

As an undergraduate in your senior year or as a graduate, you can qualify for a position as an agricultural statistician GS–5, by passing the Federal Service Entrance Examination and meeting the academic requirements of a bachelor's degree, including a minimum of 9 semester hours of college statistics and mathematics, of which 6 semester hours must be statistics. Fifteen semester hours in agriculture are also required. Within 3 years after appointment, a statistician is also required to have completed a total of 15 semester hours of statistics and mathematics. SRS has a program for providing 6 additional semester hours in statistics through correspondence courses in statistical theory and sampling.

A candidate who has a "B" average or ranks in the upper 25 percent of his class will be rated eligible for GS–7, if he attains a sufficiently high score on the written test. A candidate with a master's degree is eligible for GS–7 upon passing the Federal Service Entrance Examination.

Where To Apply

For additional information on applying for a job as an agricultural statistician, you can write to:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Attorney

GS–7 and GS–9

■ Under the direction of the General Counsel and his top staff, attorneys in the Department are engaged in legal work of great scope and variety.

Duties

Lawyers of the Office of the General Counsel, for example, (1) prepare both formal and informal legal opinions on questions arising in the administration of the Department's programs; (2) prepare and review administrative rules and regulations applicable to the public; (3) prepare and interpret contracts, mortgages, leases, deeds, and similar documents; (4) examine titles to lands to be acquired by the Department or accepted as security for loans; and (5) pass upon claims by and against the United States. They represent the Secretary in administrative proceedings; review for referral to the Department of Justice cases having criminal aspects; and, by special assignment, represent the Department in certain classes of cases on appeal.

Department attorneys handle legal work for the Rural Electrification Administration, involving corporate financing, municipal bond financing, and construction and operation of electric and telephone systems.

As corporate lawyers for the Commodity Credit Corporation and the Federal Crop Insurance Corporation, they handle an infinite variety of legal work that arises in dealings with large commercial enterprises, and other legal problems peculiar to corporate agencies of the United States.

Members of the office participate as legal advisers to Department officials in the development and administration of many varied and complex farm programs involving the expenditure of billions of dollars. They perform a broad variety of legal services in connection with loans made or insured by the Farmers Home Administration.

They prepare proposed legislation emanating from the Department; work with congressional committees and their staffs in drafting bills; prepare reports on bills; and interpret statutes for Department administrators.

Department attorneys serve as counsel in the formulation and implementation of many programs involving exports and imports of agricultural commodities.

They perform the varied legal services needed in managing the Department of Agriculture as an executive branch of the Federal Government.

Discoveries by Department of Agriculture research scientists result in many new patent matters each year, and Department lawyers prepare and handle patent applications and represent the Department in patent proceedings resulting from these discoveries.

Members of the Office of the General Counsel also serve as legal counsel for the Department in its administration of the national forests. Varied legal work is performed in connection with the Nation's soil and water conservation activities.

Lawyers of the Office of the General Counsel act as trial counsel in administrative proceedings of an adversary nature, with responsibility for pleadings, examination, and cross-examination of witnesses; oral argument; and filing briefs. They also act as presiding officers in reparation proceedings for

damages between private litigants, and serve as counsel for the Secretary of Agriculture in proceedings before other Federal and State regulatory bodies.

In litigation in the Federal and State courts, Department lawyers serve as trial counsel and assistant trial counsel in a number of cases each year. In cases in which they do not participate in the trial itself, they evaluate evidence to determine the basis for action or defense; prepare the cases for trial; assist in pretrial proceedings, draft pleadings, actions, and briefs. Some brief and argue cases on appeal in the various Federal and State courts, including the U.S. Supreme Court.

Opportunities for Employment

Under the General Counsel's Honors Program, graduates of law schools approved by the American Bar Association who rank in the upper 20 percent of their graduating classes or who receive special honors, awards, or prizes, are eligible for appointment at grade GS–9. Under the regular employment program, the entrance level for other graduates of accredited law schools is GS–7. The number of openings, both in Washington and in the field offices, varies, but about 10 to 15 new attorneys are needed each year. Graduates who are interested in advisory and opinion writing as well as trial work are sought. Courses in Administrative Law and Procedure are desirable.

Following is a list of field locations of the Office of the General Counsel:

Arkansas—*Little Rock*
California—*San Franciso and Los Angeles*
Colorado—*Denver*
Georgia—*Atlanta*
Illinois—*Chicago*
Minnesota—*St. Paul*
Missouri—*Kansas City*
Montana—*Missoula*
New Mexico—*Albuquerque*
New York—*New York*
North Carolina—*Raleigh*
Oklahoma—*Stillwater*
Oregon—*Portland*
Pennsylvania—*Harrisburg*
Puerto Rico—*Santurce*
Texas—*Temple*
Utah—*Ogden*
Wisconsin—*Milwaukee*

How to Apply

Application forms and additional information may be obtained from the: Division of Personnel, Office of Management Services, U.S. Department of Agriculture, Washington, D.C., 20250. There is no written examination, but personal interviews, either in Washington, D.C., or at a field office, are required. For their convenience, graduates and students are urged to arrange for personal interviews in advance.

Forester

GS–5 and GS–7

■ The Forest Service must constantly improve the utilization and protection of forest lands to meet the ever increasing demands made on our forests—demands which become more urgent each year. Often in the past, fertile areas were reduced to wasteland through neglect, indifference, or lack of knowledge. Fortunately, we now realize that the forests, our greatest renewable natural resource, must be given careful attention if they are to be preserved for the use of future generations.

Job of the Forester

Forestry today has become a complex job, requiring a combination of mathematics, human relations, science, engineering, and business skills, as well as professional forestry competence. It is the job of the forester to help meet the need for forest products and forest use, and at the same time develop the forests for other multiple uses on a sustained yield basis. It takes a professionally trained man to do this.

Forest Service operations offer opportunities for a broad variety of duties. In the Forest Service a forester may use his skills in National Forest administration and protection, in research, in State and private forestry cooperation, or in assisting foreign countries with their forestry problems.

The duties within these areas are varied. Foresters devise methods of protecting the forest from fire, disease, and insects. Flood control and watershed improvement are also constant responsibilities. Some foresters negotiate with buyers and conduct timber sales which amount to billions of board feet a year. Others, in cooperation with the States, manage wildlife habitats that include one-third of all big game in the country and 80,000 miles of trout streams. With the need for campgrounds, trails, swimming areas, and other facilities multiplying, the development of recreation facilities in the National Forests is a rapidly increasing part of the forester's responsibility. The coordination of range resource management within the forest land multiple use concept is an important part of most forester jobs. Research foresters explore the many complex problems of utilizing and managing forest and rangeland resources. These are just a few of the many sides of the job.

Training and Development

A beginning forester is provided with valuable training and experience in all aspects of forestry. His career usually begins on a ranger district at one of the field locations. There he gets practice in actual field operations, and training from many experienced people who give him opportunities to learn about the varied phases of forest land management.

Soon after he is hired, the forester becomes part of a continuing training and development program that will help him do a good job at every stage of his career and in several parts of the Nation. Self-development and responsibility are emphasized. Special assignments, designed to use the forester's ability and formal education, will be made. He will be able to choose a career from among the several specialities of wildland manage-

ment. Opportunities for reassignment between forests and regions will also broaden his work experience.

The Forest Service maintains 10 regional offices within the United States. Within these 10 regions are 154 National Forests divided into 805 ranger districts. For research there are 10 experiment stations, the Institute of Tropical Forestry, the Forest Products Laboratory, and more than 100 other research installations located in 50 States, Puerto Rico, and the Virgin Islands.

A forester's job offers some values that cannot be measured in objective terms. A forester knows the satisfaction of helping protect and manage valuable resources for future generations of Americans. He knows the pleasure of accomplishment that results from physical and mental alertness and intensive training. He takes pride in being a member of an organization with a reputation born out of the completion of tough assignments which required self-reliance, competence, and teamwork.

Foresters usually enter at GS–5 or GS–7, depending on their qualifications and experience. Research foresters can enter at higher levels on the basis of advanced degrees. After 6 months or a year, most are promoted to the next level—the 6-month promotion being possible under individually approved training agreements. After this, promotions are awarded on the basis of ability and competition between foresters.

Qualification Requirements

Forestry requires professional training to cope with the many technical problems involved. Requirements for GS–5 are a bachelor's degree with at least 24 semester hours in specialized fields of forestry. Lacking a bachelor's degree, an applicant may qualify for consideration if he he has 30 semester hours in science or engineering, including 24 hours in forestry, and additional work experience. Qualifications for GS–7 are the same as for GS–5 plus either 1 year of graduate study or professional experience. An applicant also may be eligible for GS–7 if he is a member of an accredited honor society, or earned a master's degree in forestry, or maintained a "B" average in college, or graduated in the upper 25 percent of his class, or otherwise attained specified scholastic achievements.

How To Apply

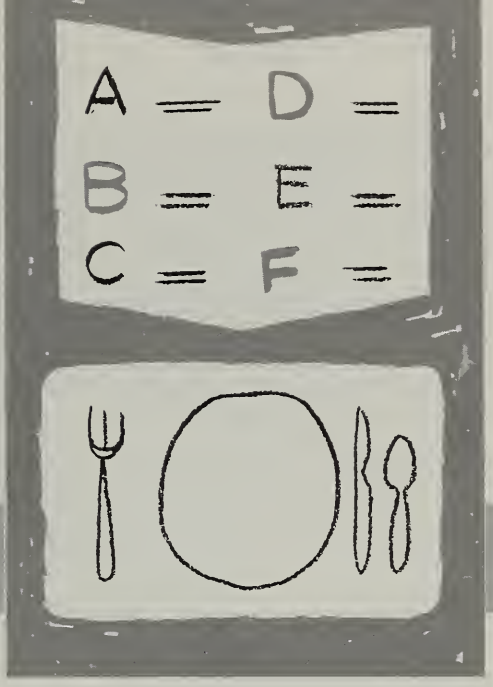
You can apply for these positions up to 9 months before graduation from college. To apply, fill out an application (Form 57), showing the title and number of the examination (Forester No. 218B); enclose your college transcript and send your application to the Executive Secretary, Board of U.S. Civil Service Examiners for the Department of Agriculture, Forest Service Unit, Washington, D.C., 20250.

You can get more information on qualifications and other requirements, by obtaining Civil Service Commission Announcement No. 218B from your local post office. You can also write to one of the Forest Service's regional offices. For information on employment in wildland management, contact the U.S. Forest Service regional offices in any of the following cities: Missoula, Mont.; Denver, Colo.; Albuquerque, N. Mex.; Ogden, Utah; San Francisco, Calif.; Portland, Oreg.; Upper Darby, Pa.; Atlanta, Ga.; Milwaukee, Wis.; and Juneau, Alaska.

For information on forestry research, contact one of the U.S. Forest Service experiment stations in the following cities: Columbus, Ohio; Ogden, Utah; St. Paul, Minn.; Upper Darby, Pa.; Juneau, Alaska; Portland, Oreg.; Berkeley, Calif.; Fort Collins, Colo.; Asheville, N.C.; and New Orleans, La. Write the U.S. Forest Service, Forest Products Laboratory, Madison, Wis., for information on research in forest products. The Institute of Tropical Forestry, Rio Piedras, Puerto Rico, conducts research and other cooperative research projects including intensive training seminars in tropical wildland resources.

Home Economist

GS–5 and GS–7



■ The home economist, as a member of the Agricultural Marketing Service (AMS), enables people all over the world to eat more and better meals.

Duties

The home economist's work for the school lunch program helps children here and abroad eat better lunches and learn what to eat to stay healthy.

She also advises the Food Distribution Division of AMS (1) on showing needy people how to best use the donated foods they receive and (2) on helping economy-minded housewives shop for, plan, and prepare better meals.

The AMS home economist receives a wide variety of assignments and gets to know and work with many different people.

Her duties include developing and applying techniques for food preparation, menu planning, recipe development, food purchasing, food cost accounting, food service equipment and layouts, sanitation, work organization and job scheduling, and adaptation of nutritional research to practical workaday standards.

The home economist may travel to many States to analyze the effectiveness of the school lunch programs in both private and public schools.

In doing all these jobs the home economist meets and works with college officials; State departments of education, health, and welfare; school officials; and school lunch workers.

The college graduate usually starts as a GS–5 or, with working experience, as a GS–7. She is given many different assignments to provide on-the-job training under supervision in all phases of the school lunch program, as well as the food programs for needy people.

Advancement

Opportunities for advancement are very good as the beginning home economist gains experience in the jobs assigned to her. She may in time advance to the GS–13 level, or higher.

Positions for home economists are available in Washington, D.C., Atlanta, Dallas, San Francisco, Chicago, and New York City.

Employment Specifications

Applicants must have a degree in home economics with course work in one or more of the areas of foods, nutrition, and institution management.

Applicants must also pass the Federal Service Entrance Examination.

Employment Procedures

For more information, you may write to any one of the following offices nearest your home:

Personnel Division, Employment Section
Agricultural Marketing Service
U.S. Department of Agriculture
Washington, D.C., 20250

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

Landscape Architect

■ More and more American families are spending their leisure time camping, fishing, hiking, skiing, and participating in other outdoor recreational activities. This trend is allowing the Forest Service's landscape architects to play an increasingly important role in making the National Forests usable by the American people. This is a complex assignment because these forest installations must be designed for the utility of intense and long range use, and the maintenance of the natural growth and beauty.

Work of the Landscape Architect

Landscape architects in the Forest Service perform the professional tasks of planning, design, layout, construction, and maintenance of landscape features and incidental structures. A broad knowledge of fundamental principles of landscape architecture, as applied specifically to wildlands and the scenic and recreation resources found on these lands, is constantly utilized. In his daily work the landscape architect applies working knowledge of objectives of other authorized uses of National Forest lands and of the extent to which these objectives may be altered or blended in the interest of preserving scenery and recreation values within limitations of economy and feasibility. He also works cooperatively with specialists in other fields to obtain the highest degree of scenic and recreation protection and enjoyment possible under the multiple use concept of management.

A landscape architect in the Forest Service has a challenging job. He is frequently requested to express his views in the investigation, inventory, and selection of lands which have important features of interest to the public. He is asked to submit recommendations, proposed designs, and comments concerning the location of approach roads, parking areas, sanitary facilities, nature trails, signs, and information buildings for easy access and comfort, with minimum disturbance to the natural conditions, and for the most dramatic presentation of scenic values to the public. His recommendations are sought for the selection of the best available tract of land for administrative headquarters for the National Forest, ranger district, or other stations. And he prepares the site plans, grading plans, and planting plans.

Camping and picnicking are important recreation activities in the National Forests and require a sizable capital outlay of funds each year to accommodate the public properly. Overuse of campgrounds and picnic areas is significant and, as a result, efforts are being made to provide needed additional facilities for all recreational uses. During the Operation Outdoors Program of 1957–62, nearly 1,000 recreation site plans were prepared each year. In the Development Program for the National Forests, 1962–72, an average of 3,000 new site plans per year will be needed. This means more landscape architects will be needed each year. Greater advancement opportunities will develop at the various administrative levels as the quantity and complexities of recreation planning increase.

Training

Upon accepting a position with the Forest Service, the landscape architect immediately begins to receive training and experience. Training guides have been prepared for all recreation personnel so that "on-the-ground" experience is furnished and recreation courses provided, depending upon the career-ladder steps attained or desired.

Location of Jobs

The Forest Service field units are widely dispersed and found in almost every State. Most of the forests are found in the Western States and therein lies a great opportunity for those wishing to live and work in forests having the most rugged terrain of any in the National Forest System. Beautiful forest scenery is found in all National Forests, and opportunities for the families of employees to enjoy outdoor recreation activities are greatly varied. Most ranger district headquarters are located either by themselves in natural settings or within small communities within forest boundaries. National forest headquarters are usually situated in larger communities or small cities. Regional headquarters are located in the larger cities near the respective geographical center of the 10 regions.

Qualification Requirements

Landscape architects enter the Forest Service at the GS–5 and GS–7 levels. A degree in landscape architecture or landscape design is a requisite for civil service status as a landscape architect. Those having had courses or experience in surveying and use of plant materials and related courses or experience are particularly needed for Forest Service recreation work. At least at the beginning of a landscape architect's career in the Forest Service, much use is made of the plane table with telescopic alidade and of other surveying instruments. The ability to work harmoniously with coworkers and to mix well with neighbors and community workers is also desirable. Entrance at the GS–7 level is possible if the applicant attained a master's degree or maintained a "B" average or better in college or graduated in the upper 25 percent of his class, qualified for an accredited honor society or attained other specified scholastic levels. Graduate study, advanced degrees, or professional experience may qualify you for entrance at higher levels.

Promotional Opportunities

Landscape architects entering the Forest Service are usually assigned to recreation planning duties on a National Forest or ranger district. Much fieldwork is required in a landscape architect's early career. As he gains experience and assumes supervisory responsibilities over other landscape architects and recreation planners, less fieldwork is required. Then the work principally involves the more important problem areas and the review of work done by others. The career ladder extends from the ranger district to the forest, region, and finally to the Washington Office of the Forest Service.

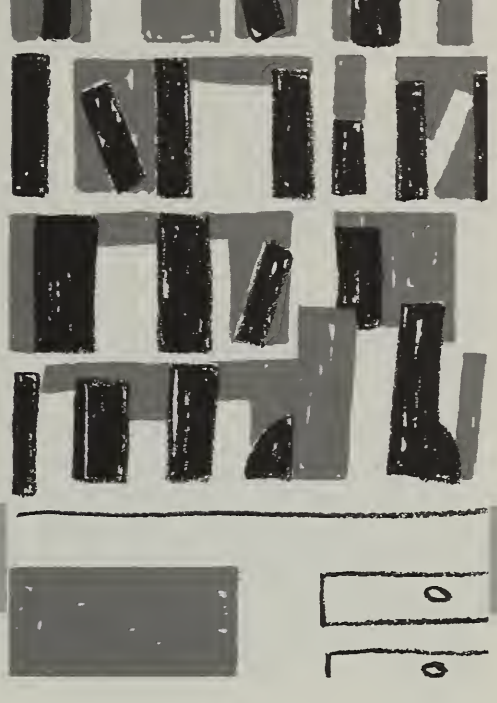
How To Apply

Applications will be accepted from undergraduate and graduate students in accredited landscape architecture colleges who expect to complete within 9 months of the date of filing application all the courses required to qualify in this examination.

For information on employment as a landscape architect with the Forest Service, contact the U.S. Forest Service regional office in the following cities: Missoula, Mont.; Denver, Colo.; Albuquerque, N. Mex.; Ogden, Utah; San Francisco, Calif.; Portland, Oreg.; Upper Darby, Pa.; Atlanta Ga.; Milwaukee, Wis.; and Juneau, Alaska.

Librarian

GS–7 through GS–12



■ Since researchers depend on publications in many different fields, the National Agricultural Library maintains a solid collection in a broad range of scientific materials. The backbone of this collection, acquired in 50 different languages, consists of works in general agriculture, botany, zoology, chemistry, veterinary medicine, forestry, plant pathology, livestock, poultry, entomology, and agronomy.

The agricultural librarian works closely with this varied and highly technical collection to bring the world literature in agriculture and related sciences to Department of Agriculture research workers and to all others who are seriously interested in any facet of agriculture.

Most positions for agricultural librarians are in Washington, D.C., and in Beltsville, Md. Some vacancies also exist in agency field libraries.

Nature of the Work

Acquisitions librarians select publications from bibliographical and other sources, search selected citations to determine needs, and initiate requests for procurement by purchase, gift, or exchange. Approximately 10,000 titles are ordered each year.

Bibliographers plan, develop, and compile the "Bibliography of Agriculture," a comprehensive monthly index to the literature in agriculture and related sciences; perform extensive literature searches and prepare special lists of literature sources to meet specific demands of researchers; and compile and publish other specialized agricultural bibliographies.

Catalogers describe acquired material and assign pertinent subjects and classification; prepare original manuscript for cards which are printed and sold by the Library of Congress; and develop cataloging procedures, the system of subject headings, and the classification scheme to meet the needs of subject specialists.

Lending librarians develop plans and procedures for provision of reader services through loans to authorized individuals and to other agencies; for photocopies in lieu of loan and for sale; for application of interlibrary loan codes; and for housing, servicing, and preserving the collection.

Reference librarians provide all types of reference services to answer requests in person, by telephone, or by mail. Information is derived by consulting publications in the collection.

Administrative librarians direct and supervise the types of library functions previously described in various organizational units in Washington, D.C., or at branch or agency field libraries.

Field librarians supervise and administer all types of library functions at agency field libraries, including one, or a combination, of the duties previously described. Service is given primarily to concentrations of professional personnel located at various Department of Agriculture research installations throughout the United States.

Qualification Requirements

Applicants for librarian positions in grades GS-7 through GS-12 must have successfully completed one of the following: (1) a full 4-year course of study in an accredited college or university, including or supplemented by at least 24 semester-

hour credits in library science; (2) 4 years of successful and progressive experience in library work; or (3) any time and quality equivalent combination of 1 and 2. In addition to these requirements applicants must have had successful and progressive experience in professional library work which included the performance, supervision, or direction of one or more of the major library functions as follows: 1 year of additional experience for GS-7; 2 years for GS-9; and 3 years for GS-11 and GS-12.

Substitution of graduate study for experience: Completion of all requirements for a master's degree, or completion of 1 full year of graduate study in library science in an accredited college or university may be substituted for 1 year of the additional required experience and will qualify for GS-7.

Knowledge of one or more foreign languages and education or experience in the biological sciences is desirable but not absolutely essential. Applicants for all grades who have completed 4 or more years of college education that included or was supplemented by at least 24 semester-hour credits (or equivalent) in library science will not be required to take a written examination.

Applicants for GS–7 who qualify on the basis of experience alone or a combination of experience and education and who do not also meet the experience requirements for GS–9 or above must pass a screening test. Applicants who meet the experience and training requirements for GS–9 and above will not be required to take a written test for any grade.

Advancement

Under the Career Service Program of the National Agricultural Library, vacant positions above the entrance level are usually filled by promotion or reassignment from within the Library, as long as well-qualified people are available.

Vacancies in the Library are filled on the basis of merit by employees who meet the qualification standards, with consideration to the employee's interests and desires. Consideration is also given to professional and technical qualifications, supervisory ability when required, efficiency, length of service, personality traits, working relationships, potential for advancement, suggestion and other awards, and other similar evaluative factors.

Additional training, other than that acquired in the position, is available through:

- Government Employees Training Act
- U.S. Department of Agriculture Graduate School
- Several local universities

How To Apply

FOR FURTHER INFORMATION and application forms, please write the:

Division of Personnel
Office of Management Services
U.S. Department of Agriculture
Washington, D.C., 20250

Veterinarian

GS–9, 11, 12, 13, 14, 15

Veterinarians are employed in three regulatory divisions and one research division of the Agricultural Research Service. They combat outbreaks of animal diseases, conduct research for the control and eradiation of diseases, and cooperate in the protection of the Nation's food supply.

The Job

Veterinarians perform antemortem and postmortem inspection of food animals. They inspect livestock at stockyards or ports of entry into the United States. Also, they inspect licensed establishments producing veterinary biologics. Veterinarians administer tests for diseases, conduct diagnostic studies in laboratories, and conduct research on livestock and poultry diseases.

- Veterinarians contact livestock owners to arrange for testing herds for brucellosis and tuberculosis; test the herds and observe the results; identify infected animals; and recommend disposition of diseased animals.
- Veterinarians inspect the manufacture of a large variety of vaccines and viruses, bacterines, and equine, canine, feline, and bovine serums, diagnostics, and other biologicals to determine whether there has been proper treatment and handling of production animals and whether the antigens used for hyperimmunication are identified, grown, prepared, concentrated, standardized, and inspected in accordance with specifications, etc.
- Veterinarians conduct antemortem inspection of food producing animals, making visual and digital inspections. They separate those showing evidence of disease, injury, or physical abnormalities and supervise the disposal after slaughter of animals found unfit for human consumption.
- Veterinarians inspect meat packing plants to ascertain whether sanitary requirements are being enforced; whether floors, walls, ceilings, rails, windows are clean; whether air circulation is adequate and windows and other openings are properly screened; and whether excessive vapors and odors are eliminated.
- Veterinarians certify to the eligibility-for-free-entry of purebred animals imported by U.S. citizens for breeding purposes.
- Veterinarians determine the symptoms, pathology, diagnosis, treatments, and methods of control and prevention of diseases or conditions caused by bacteria, viruses, rickettsia, fungi, and internal and external parasites.

The Meat Inspection Division employs the largest number of veterinarians. Its major task is to assure the wholesomeness, freedom from disease, cleanliness, and informative labeling of meat and meat food products prepared under Federal supervision. Diseased or otherwise unfit meat is destroyed.

The Animal Disease Eradication Division employs veterinarians in its nationwide cooperative programs to control and eradicate livestock diseases. This Division insures the safe and humane transport of animals within the United States and detects and prevents the spread of communicable diseases of poultry and livestock in interstate commerce.

The Animal Inspection and Quarantine Division

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employs veterinarians to protect the livestock and poultry industries of this country from diseases of foreign origin and provides for the inspection, humane treatment, and safe transport of animals for export. This Division works closely with private industry in the production of biological products for the treatment of domestic animals.

Veterinarians working with the regulatory programs serve the consumers by making certain that an adequate supply of clean, sound, wholesome food of animal origin is available. They are recognized throughout the world for their achievement in preventing the entrance of foreign livestock diseases, in controlling and eradicating animal diseases present in our livestock, and in the preparation and testing of vaccines and serums. Veterinarians are stationed in over 700 locations throughout the United States. The regulatory divisions offer excellent opportunities because they follow a policy of promotion-from-within. Therefore, employees are in line for promotion to higher grades on the basis of the division's need and the demonstrated ability of the individual.

Research veterinarians find that association with outstanding scientists, many ranking as authorities in their fields, broadens their research horizons and develops their individual capabilities. Contacts and collaboration with leaders in industry, with scholars from academic circles, and with scientists at widely known research centers enrich the program of the Agricultural Research Service and stimulate professional growth. In-service training through seminars, meetings, and other techniques is common practice.

Employment Specifications

Generally, completion of a course of study resulting in the degree of doctor of veterinary medicine or an equivalent degree in veterinary medicine from an accredited school of veterinary medicine is required. Most veterinarians in the Agricultural Research Service are initially employed at grade GS–9 or GS–11.

To qualify for grades higher than GS–9, the following education is required:

- For GS–11, 1 year of responsible professional veterinary experience or 1 year of post graduate research experience.
- For GS–12, 2 years of responsible professional experience showing a thorough knowledge of the field of veterinary medicine related to the field of specialization, the ability to perform difficult professional work requiring judgment and initiative, and skill in developing and maintaining effective working relationships with individuals and groups. For research positions, one of the 2 years must show the ability to perform research at this level.
- For positions at higher levels, GS–13, 14, and 15, progressively more responsible experience is required. For regulatory divisions, experience with difficult and very complex veterinary programs related to the field of specialization is required. For research positions, at least 3 years of experience showing the ability to perform advanced research in the field of veterinary medicine are required.

Graduate study may be substituted for experience as follows in qualifying for research positions:

1. Successful completion of all requirements for a master's degree may be substituted for 1 year of experience and qualifies in full for GS–11.

2. Successful completion of all requirements for the doctor's degree, including the dissertation, may be substituted for 2 years of the required experience and qualifies in full for GS–12.

Employment Procedures

If interested in these positions, you may apply under the Veterinarian examination. Copies of this announcement are available at first- and second-class post offices, college placement offices, and the Personnel Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250.

U.S. Department of Agriculture

Veterinarian Poultry Inspection

GS–9

■ Inspection of the Nation's poultry supply to assure its wholesomeness and safety for food is one of the basic services necessary to the public health. Some 8 billion pounds of poultry meat is inspected each year.

This service is performed by the Poultry Division of USDA's Agricultural Marketing Service. It is operated by veterinarians. They are responsible for its integrity and its sound and effective operation.

Duties

Some 560 veterinarians are employed in the Poultry Inspection Service, along with more than 1,400 "line" inspectors, stationed in 894 processing plants throughout the Nation.

As a member of this team, the veterinarian inspector may be in charge of the work at one or more plants. It is his responsibility to see that a thorough post-mortem examination is made of each bird processed and that the processing plant follows prescribed operating and sanitary procedures. Thus his work requires not only technical knowledge, but also the ability to supervise the work of others and to deal tactfully with the plant management in day-to-day operations.

The veterinarian-inspector may be assigned to supervise operations in a plant preparing poultry convenience foods, such as frozen pies, soups, or other ready to heat-and-eat products. Here his responsibilities extend to checking on all ingredients that go into the product and assuring compliance with the approved formula for the product.

The veterinary-inspector-in-charge has his own office and a considerable degree of responsibility. But throughout his career he continues to receive training in management and in new technical developments. He benefits, also, through continued close association with other veterinarians in the same field of work.

The work is challenging and varied, and opportunity for rapid advancement is excellent for those who are willing to assume responsibilities.

Working conditions are good. Most poultry processing plants are modern, clean, well lighted, and situated in semirural areas. The inspector may have an opportunity to choose his location from among the many areas where these plants are located.

He may also have an opportunity to work in the central office in Washington if he has or acquires specialized training in subjects such as engineering, food technology, bacteriology, education, photography, gross and microscopic pathology, and chemistry.

Training and Advancement

Those who enter on duty as GS–9 inspector-trainees receive an intensive 6 months of specialized training. After successfully completing this training, they are promoted to the GS–11 level, and become fully qualified veterinary inspectors. Under the regular promotion system, inspectors may expect transfers from smaller plants to larger plants and later may join the staff of an area office which supervises all the plants in a geographic region. Each promotion is based on the veterinarian's increased knowledge and ability to handle more responsibility.

Employment Specifications

A D.V.M. from a school of veterinary medicine approved by the American Veterinary Medical Association is required. You will not be required to take a written examination.

Employment Procedures

For further information you may write to one of the following offices nearest your home:

EAAD, Personnel Branch, AMS
U.S. Department of Agriculture
Federal Center Building
Hyattsville, Md., 20781

CAAD, Personnel Branch, AMS
U.S. Department of Agriculture
536 South Clark Street
Chicago, Ill., 60605

WAAD, Personnel Branch, AMS
U.S. Department of Agriculture
2180 Milvia Street
Berkeley, Calif., 94704

SECTION IV

APPENDIX

APPENDIX A

OPPORTUNITY INDEX COLLEGE MAJOR AND JOBS

	Page	Any Major	Accounting	Architecture	Agriculture	Agricultural Business	Agricultural Education	Agricultural Sciences	Biological Sciences	Business Administration	Economics	Engineering	Forestry	Home Economics	Journalism	Law	Library Science	Physical Sciences	Public Administration	Social Sciences	Statistics & Math	Veterinary Med.
Careers in Administration																						
Administration	1.01–1.09	●																				
Agricultural Writer-Editor	1.05				●									●								
Auditor and Investigator	1.07		●			●			●	●					●							
Contract Specialist	1.13								●		●				●							
Digital Computer Programmer-Analyst	1.15	●																				
Secretary (Overseas)	1.17	●																				
Careers in Agricultural Marketing																						
Agricultural Market Reporter	2.01–2.05				●	●		●			●											
Agricultural Marketing Specialist (Commodity Programs)	2.07				●	●				●	●											
Agricultural Marketing Specialist (Fruits and Vegetables–Programs)	2.09				●	●				●	●											
Agricultural Marketing Specialist (Fruits and Vegetables–Regulatory)	2.11		●			●		●	●		●					●						
Agricultural Marketing Specialist (Livestock and Meat)	2.13					●		●														
Careers in Agricultural Programs																						
Agricultural Commodity Grader (Processed Fruits and Vegetables)	3.01				●				●													
Agricultural Commodity Grader (Grain)	3.03				●																	
Crop Insurance Fieldman and Supervisor	3.05				●																	
Farm Management Supervisor	3.07				●	●	●															
Operations Trainee (Utilities)	3.09			●					●													
Plant Quarantine Inspector	3.11							●														
Soil Conservationist	3.13				●			●														
Range Conservationist	3.15–3.17				●		●	●	●													
Warehouse Examiner	3.19–3.21				●	●	●			●	●											

OPPORTUNITY INDEX COLLEGE MAJOR AND JOBS—Continued

Careers in Research Science	Page
Agronomist	4.01
Chemist	4.03
Entomologist	4.05–4.07
Food Technologist—Marketing	4.09
Forest Service Research	4.11
Forest Geneticist	4.15
Geneticist	4.17
Horticulturist	4.19
Microbiologist	4.21
Plant Pathologist	4.23–4.25
Plant Physiologist—Marketing	4.27
Soil Scientist	4.29
Careers in Engineering	
Civil (highway) Engineer	5.01
Electrical Engineer	5.03
Engineer in Research	5.05
Engineer (Soil Conservation)	5.07
Industrial Engineer	5.09
Mechanical Engineer	5.11
Careers in Other Professions	
Agricultural Economist	6.01–6.03
Agricultural Statistician	6.05
Attorney	6.07
Forester	6.09
Home Economist	6.11
Landscape Architect	6.13
Librarian	6.15
Veterinarian	6.17–6.19

PPENDIX B

EMPLOYMENT OPPORTUNITIES BY AGENCY

AGRICULTURAL MARKETING SERVICE

AGRICULTURAL RESEARCH SERVICE

AGRICULTURAL STABILIZATION & CONSERVATION SERVICE

ECONOMIC RESEARCH SERVICE

APPENDIX C

CIVIL SERVICE COMMISSION OFFICES

ADDRESSES OF CIVIL SERVICE OFFICES	AREA OF JURISDICTION
Central Office—United States Civil Service Commission, Washington, D.C., 20415	Washington, D.C.; Alexandria, Va.; Falls Church, Va.; Arlington and Fairfax Counties, Va.; Prince Georges and Montgomery Counties, Md.; and overseas areas, except the Pacific
Atlanta Region—Atlanta Merchandise Mart, 240 Peachtree Street, N.W., Atlanta, Ga., 30303	Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and Virgin Islands
Boston Region—Post Office and Courthouse Building, Boston, Mass., 02109	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
Chicago Region—Main Post Office Building, 433 W. Van Buren Street, Chicago, Ill., 60607	Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin
Dallas Region—1114 Commerce Street, Dallas Tex., 75202	Arkansas, Louisiana, Oklahoma, and Texas
Denver Region—Building 41, Denver Federal Center, Denver, Colo., 80225	Arizona, Colorado, New Mexico, Utah, and Wyoming
New York Region—News Building, 220 E. 42d Street, New York, N.Y., 10017	New Jersey and New York
Philadelphia Region—Customhouse, Second and Chestnut Streets, Philadelphia, Pa., 19106	Delaware, Maryland, Pennsylvania, Virginia, and West Virginia
St. Louis Region—1256 Federal Building, 1520 Market Street, St. Louis, Mo., 63103	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota
San Francisco Region—128 Appraisers Building, 630 Sansome Street, San Francisco, Calif., 94111	California, Hawaii, Nevada, and the Pacific Overseas Area
Seattle Region—302 Federal Office Building, First Avenue and Madison Street, Seattle, Wash., 98104	Alaska, Idaho, Montana, Oregon, and Washington

APPENDIX D

U.S. DEPARTMENT OF AGRICULTURE
Boards of U.S. Civil Service Examiners

AGENCY	LOCATION	AREA OF JURISDICTION
AMS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Marketing Service Federal Center Building Hyattsville, Md., 20781	Alabama, Connecticut, Delaware, District of Columbia, Florida, Georgia, Kentucky, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia
AMS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Marketing Service Central Area Administrative Division 536 South Clark Street Chicago, Ill., 60605	Arkansas, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Texas, Wisconsin
ARS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Research Service Eastern Administrative Division Fort Washington, Pa., 19034	Connecticut, Delaware, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia
ARS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Research Service Northern Administrative Division 400 South Fourth Street Minneapolis, Minn., 55415	Alaska, Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin
ARS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Research Service Southern Administrative Division P.O. Box 53326 New Orleans, La., 70150	Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Puerto Rico, Virgin Islands
ARS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Research Service Western Administrative Division 1960 Addison Street Berkeley, Calif., 94704	Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming (Joint board—ARS and AMS) AMS coverage includes Alaska

AGENCY	LOCATION	AREA OF JURISDICTION
ARS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Research Service Federal Center Building Hyattsville, Md., 20781	Beltsville, Maryland and immediate surrounding area in Prince George's County
ASCS	Executive Secretary Board of U.S. Civil Service Examiners Agricultural Stabilization and Conservation Service Box 205, 8930 Ward Parkway Kansas City, Mo., 64141	All States and Territories
FHA	Executive Secretary Board of U.S. Civil Service Examiners Farmers Home Administration Room 148 New Customhouse Denver, Colo., 80202	All States and Territories
FCIC	Executive Secretary Board of U.S. Civil Service Examiners Federal Crop Insurance Corporation Room 4616 South Building Washington, D.C., 20250	All States and Territories
FS	Executive Secretary Board of U.S. Civil Service Examiners Forest Service 411 N.E. Twelfth Avenue Portland, Oreg., 97212	Washington, Oregon, Montana, Northern Idaho, Alaska
FS	Executive Secretary Board of U.S. Civil Service Examiners Forest Service Bldg. 85, Denver Federal Center Denver, Colo., 80225	California, Hawaii, Utah, Southern Idaho, Nevada, Colorado, Wyoming, South Dakota, Nebraska, Kansas, Arizona, New Mexico
FS	Executive Secretary Board of U.S. Civil Service Examiners Forest Service 50 Seventh Street Atlanta, Ga., 30223	Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Tennessee, Alabama, North Carolina, South Carolina, Georgia, Florida, Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, Maryland, Delaware, New Jersey, Virginia, West Virginia, Kentucky, North Dakota, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan. Indiana, Ohio

AGENCY	LOCATION	AREA OF JURISDICTION
SCS	Executive Secretary Board of U.S. Civil Service Examiners Soil Conservation Service 222 South West Temple Street Salt Lake City, Utah, 84101	Arizona, California, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming, Alaska, Hawaii
SCS	Executive Secretary Board of U.S. Civil Service Examiners Soil Conservation Service 3608 McCart Street Fort Worth, Tex., 76110	Alabama, Arkansas, Florida, Georgia, Kansas, Louisiana, Mississippi, Missouri, New Mexico, Oklahoma, Texas
SCS	Executive Secretary Board of U.S. Civil Service Examiners Soil Conservation Service Room 6121 South Building Washington, D.C., 20250	Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, District of Columbia, Puerto Rico
	Central Board	
	Executive Secretary Board of U.S. Civil Service Examiners U.S. Department of Agriculture Office of Management Services Unit Room 6348 South Building Washington, D.C., 20250	Nationwide
	Executive Secretary Board of U.S. Civil Service Examiners U.S. Department of Agriculture Agricultural Research Service Unit Federal Center Building Hyattsville, Md., 20781	Nationwide
	Executive Secretary Board of U.S. Civil Service Examiners U.S. Department of Agriculture Agricultural Marketing Service Unit Room 1709 South Building Washington, D.C., 20250	Nationwide
	Executive Secretary Board of U.S. Civil Service Examiners U.S. Department of Agriculture Forest Service Unit Room 212 Liberty Loan Building Washington, D.C., 20250	Nationwide

U.S. GOVERNMENT PRINTING OFFICE: 1964—O-723-754

I would like to receive additional employment information on opportunities with _____.
(*Name of Agency–Agencies*)

I am interested in _____.
(*Type of Work*)

Please send me the appropriate application forms. I am now attending _____.
(*Name of School*)

My college major is _____.

Expected graduation date _____.

Name _____

Address _____
(*Street*) (*City*)

State _____ Phone _____

I would like to receive additional employment information on opportunities with _____.
(*Name of Agency–Agencies*)

I am interested in _____.
(*Type of Work*)

Please send me the appropriate application forms. I am now attending _____.
(*Name of School*)

My college major is _____.

Expected graduation date _____.

Name _____

Address _____
(*Street*) (*City*)

State _____ Phone _____

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U.S. Department of Agriculture
Washington, D.C., 20250

ATTN. *College Recruitment*

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